



*Washington
Department of*
**FISH and
WILDLIFE**

**JOINT STAFF REPORT
CONCERNING THE 2003 FALL IN-RIVER COMMERCIAL
HARVEST OF COLUMBIA RIVER FALL CHINOOK SALMON,
SUMMER STEELHEAD, COHO SALMON, CHUM SALMON,
AND STURGEON**

Joint Columbia River Management Staff

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July 16, 2003

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JOINT STAFF REPORT CONCERNING THE 2003 IN-RIVER COMMERCIAL HARVEST OF COLUMBIA RIVER FALL CHINOOK SALMON, SUMMER STEELHEAD, COHO SALMON, CHUM SALMON, AND STURGEON

INTRODUCTION

This report describes fall fisheries in the mainstem Columbia River and includes summaries of 2002 fall fisheries, 2003 management guidelines, expected 2003 fall fish runs, and the outlook for 2003 fall fisheries. This report is the third in an annual series produced by the Joint Columbia River Management Staff of the Oregon Department of Fish and Wildlife (ODFW) and Washington Department of Fish and Wildlife (WDFW) prior to each major Columbia River Compact hearing. Information concerning early and late fall mainstem management periods and fall Select Area fisheries are included in this report.

The first Compact hearing of the 2003 fall management period will begin at 10 AM, Wednesday July 30 at the Oregon Department of Fish and Wildlife headquarters office located at 2501 SW First Avenue, Portland, Oregon. The purpose of this hearing is to consider non-Indian commercial fishing options for the mainstem Columbia River. Following the hearing, the states will consider Select Area fall salmon seasons in Big Creek, Youngs Bay, Tongue Point, Blind Slough, Deep River, and Steamboat Slough. Two additional Compact hearings have already been scheduled for 10 AM Tuesday August 12 and 10 AM Friday August 22 at the Water Resources Education Center located at 4600 S. E. Columbia Way, Vancouver, Washington. The purposes of these hearings are to review salmon and steelhead stock status and to consider non-Indian commercial fisheries and/or treaty Indian commercial fisheries in the mainstem Columbia River. Further Compact hearings will be scheduled throughout the fall management period as needed to continue to evaluate salmon and steelhead stock status and address additional treaty Indian and non-Indian commercial seasons or adopt in-season modifications to ongoing commercial fisheries.

Salmon and summer steelhead returns are forecast prior to the fall season and are updated in-season based on the most current ocean and in-river fishery information plus Columbia River dam counts (Table 1). White sturgeon abundance in the lower Columbia River is updated annually. The data in this report are a consensus of the Technical Advisory Committee (TAC) which completed its review prior to printing. The TAC is comprised of biologists from state and federal fish management agencies and the Columbia River treaty Indian tribes, and functions by agreement of the parties under *U. S. v. Oregon*.

THE COMPACT

The Columbia River Compact is charged by congressional and statutory authority to adopt seasons and rules for Columbia River commercial fisheries (Figure 1). In recent years, the Compact has consisted of the Oregon and Washington agency directors, or their delegates, acting on behalf of the Oregon Fish and Wildlife Commission (OFWC) and the Washington Fish and Wildlife Commission (WFWC). In addition, the Columbia River treaty tribes have authority to regulate treaty Indian fisheries.

When addressing commercial seasons for salmon, steelhead, and sturgeon, the Compact must consider the effect of the commercial fishery on escapement, treaty rights, and sport fisheries, as well as the impact on species listed under the Endangered Species Act (ESA). Although the

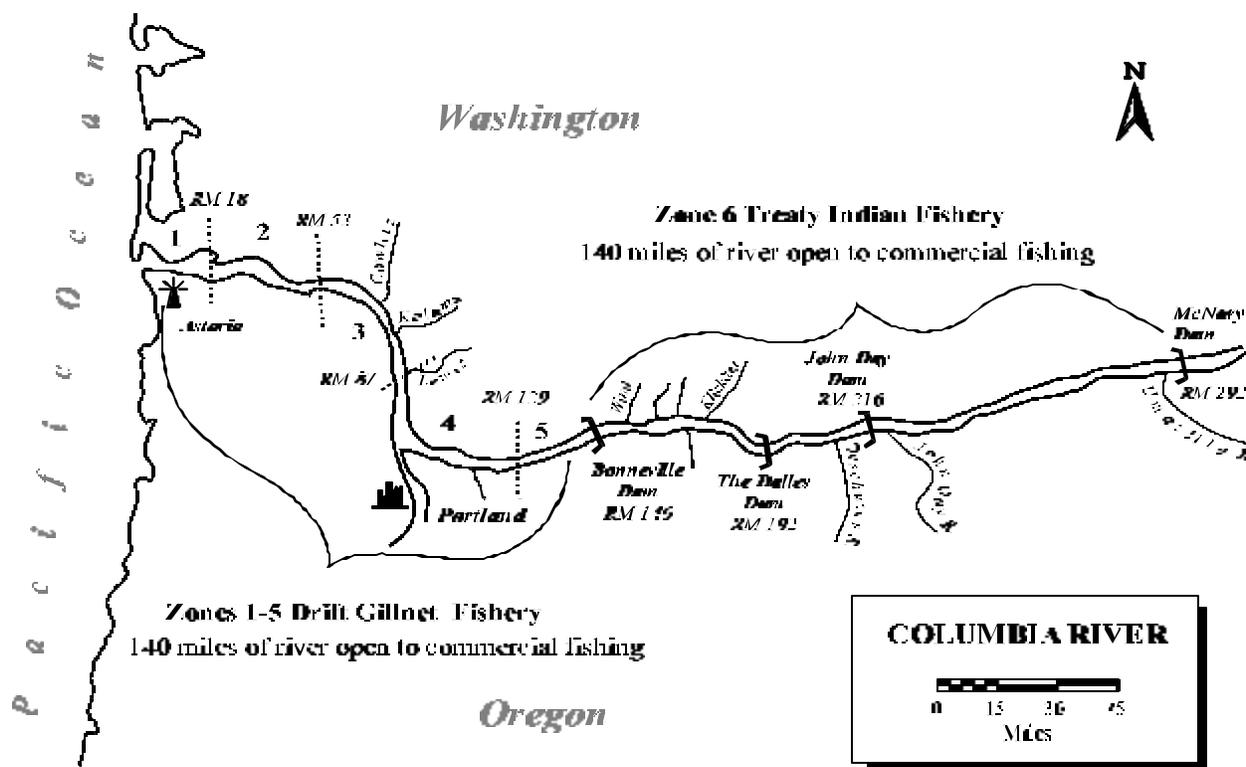


Figure 1. Columbia River Commercial Fishing Zones.

Compact has no authority to adopt sport fishing seasons or rules, it is an inherent responsibility of the Compact to address the allocation of limited resources among users and this responsibility has become increasingly demanding in recent years. The Compact can be expected to continue its conservative management strategy when considering fisheries that will impact listed salmon and steelhead.

STOCK STATUS

Fall Chinook

Stock Description

Fall chinook generally enter the Columbia River from late July through October with abundance peaking in the lower river from mid-August to mid-September and passage at Bonneville Dam peaking in early September. Columbia River fall chinook are comprised of five major components: Lower River Hatchery (LRH), Lower River Wild (LRW), Bonneville Pool Hatchery (BPH), Upriver Bright (URB), and Mid-Columbia Bright (MCB). The LRH and BPH stocks are referred to as tules and the LRW, URB, and MCB stocks are referred to as brights. Minor run components include Lower River Brights (LRB) and Select Area Brights (SAB).

The URB, BPH, and a portion of MCB chinook are produced above Bonneville Dam, and in aggregate, comprise the upriver run, which is subject to treaty Indian/non-Indian allocation requirements. Most of the URB stocks are wild fish destined for the Hanford Reach section of the Columbia River. Smaller URB components are destined for the Deschutes, Snake, and Yakima rivers. Snake River Wild (SRW) fall chinook are a sub-component of the URB stock. The MCBs originated from, and are considered a component of the URB stock. The upriver MCB component (Pool Upriver Brights or PUB stock) is comprised of brights that are reared at

Bonneville, Little White Salmon, Irrigon, and Klickitat hatcheries and released in areas between Bonneville and McNary dams. Natural production of brights derived from PUB stock is also believed to occur in the mainstem Columbia River below John Day Dam, and in the Wind, White Salmon, Klickitat, and Umatilla rivers. The BPH stock is produced primarily at Spring Creek Hatchery in the Bonneville Pool. BPH passage at Bonneville Dam occurs over a shorter time frame than the URB and MCB chinook (Figure 2). Natural production of tules occurs in the Wind, White Salmon, and Klickitat rivers.

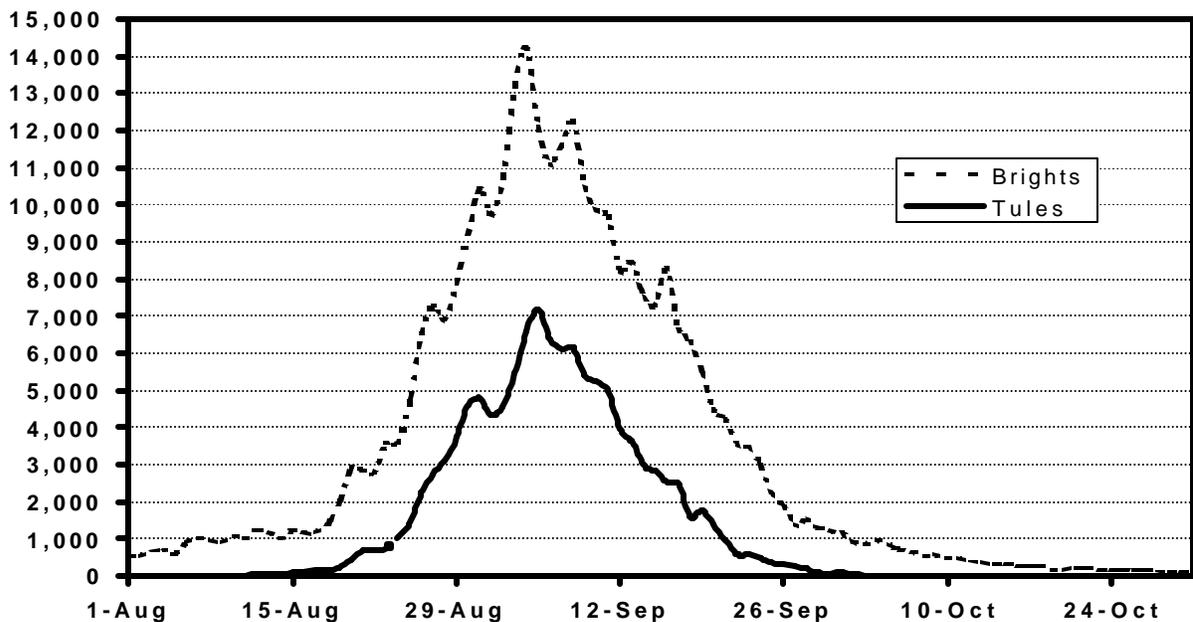


Figure 2. Average Run Timing of Adult Fall Chinook over Bonneville Dam (1993-2002) Applied to the 2003 Forecasts

The lower river run is comprised of LRH, LRW, MCB, LRB, and SAB stocks, which are produced below Bonneville Dam. The LRH stock is currently produced from hatchery facilities (five in Washington and one in Oregon) while the LRW stock is naturally produced primarily in the Lewis River system, with smaller components also present in the Cowlitz and Sandy rivers. Some natural production of LRH stock occurs in several tributaries below Bonneville Dam. The MCB production below Bonneville Dam (Bonneville Upriver Brights or BUB stock) occurs at Bonneville Hatchery in Oregon. The LRBs are a self-sustaining natural stock that spawns in the mainstem Columbia approximately three miles downstream from Bonneville Dam. The LRB stock is closely related to upriver brights and is thought to have originated from MCB or URB stock. Prior to 1998, LRBs were classified as BUBs, and therefore were considered to be a component of the MCB stock. Beginning in 1998, LRBs were identified as a separate stock. SABs are a local hatchery stock that originated from the Rogue River fall chinook stock and are currently released from Klaskanine Hatchery on the North Fork Klaskanine River and net pens located in Youngs Bay.

2002 Returns

The total Columbia River fall chinook adult return of 733,100 adults in 2002 was the largest return since 1988 and tripled the 1991-1995 average of 241,400 and more than doubled the recent 5-year average of 338,200 (Table 2). In 2002 URB's comprised 38% of the total river mouth return and the URB return of 276,900 adults was the largest return since 1988 but well

below the record return of 420,600 in 1987 (Table 3). The 2002 McNary Dam count of 141,700 adults surpassed the management goal of 46,000 and was the largest count since 1987. The Deschutes River basin return of 12,300 adults exceeded the 2001 return and the recent 5-year average of 9,100. Estimated returns of SRW fall chinook to the Columbia River since 2001 were not available at the time this report was written because run reconstruction analyses had not been completed (Table 4).

The BPH return of 160,800 adults was the largest return since 1976 and the fifth largest return on record. Adult returns of BPH included 67,440 fish to Spring Creek Hatchery, which was nearly 10 times the escapement goal of 7,000 adults. Natural spawning escapement of BPH stock adults totaled 375, 1,787, and 3,817 in the Wind, White Salmon, and Klickitat rivers, respectively.

The 2002 MCB return to the river mouth of 106,000 adults was the largest MCB return since 1989, and included 48,100 PUB stock and 57,900 BUB stock. The adult PUB fall chinook return included an escapement of 1,848 to Little White Salmon Hatchery, which is slightly less than the 2,000 fish escapement goal. Natural escapement of adult PUB stock included 3,934 in the White Salmon River and 7,872 in the Klickitat River, as compared to the interim escapement goals of 1,300 and 1,000 fish, respectively. The return of BUB stock in 2002 totaled 57,900 adults to the mouth of the Columbia River, including 19,300 BUB's escaping to Bonneville Hatchery which was more than triple the 5,750 fish escapement goal. Significant natural escapement of BUBs does not occur. The return of LRB's in 2002 was 2,400 fish, of which most spawned in the mainstem Columbia River just below Bonneville Dam.

LRH returns in 2002 totaled 156,400 adults which is the largest return since 1988, even though Mitchell Act funding reductions have been in effect in recent years. A total of 50,800 fish returned to Oregon and Washington hatcheries below Bonneville Dam, which greatly exceeded the escapement goal of 13,600. A total of 30,200 fish returned to Washington hatcheries (goal 10,000) and 20,600 returned to Big Creek Hatchery in Oregon (goal 3,600). An additional 58,200 LRH fall chinook spawned in Washington tributaries below Bonneville Dam and interim natural escapement goals in most Washington tributaries were achieved in 2002.

Returns of LRW chinook improved significantly in 2002 with a river mouth return of 24,900 adults, which is the largest LRW return since 1989 and doubles the recent 10-year average of 11,700. The natural spawning escapement goal of 5,700 fish to the North Fork Lewis River was achieved in 2002 with a natural spawning escapement of 13,926 adults. Returns of SAB chinook in 2002 totaled 5,700 fish which is the second largest return on record.

2003 Forecast

The forecasted total adult return of fall chinook in 2003 of 595,200 adults is a decrease from last year's near record return of 733,100 adults but would still be the fourth largest return since 1948 (Table 1 and Figure 3). The forecasted returns of 258,400 URB adults and 86,600 MCB adults would both greatly exceed the recent 5-year averages of 194,700 URB adults and 61,900 MCB adults. The BPH forecast of 101,900 adults is smaller than the recent two return years (125,000 and 136,000) but is larger than the recent 10-year average of 75,300. The LRW forecast of 23,400 adults would be similar to last year's actual return of 24,900 and the second largest return since 1989. The LRH forecast of 116,900 adults would also be the second largest return since 1989.

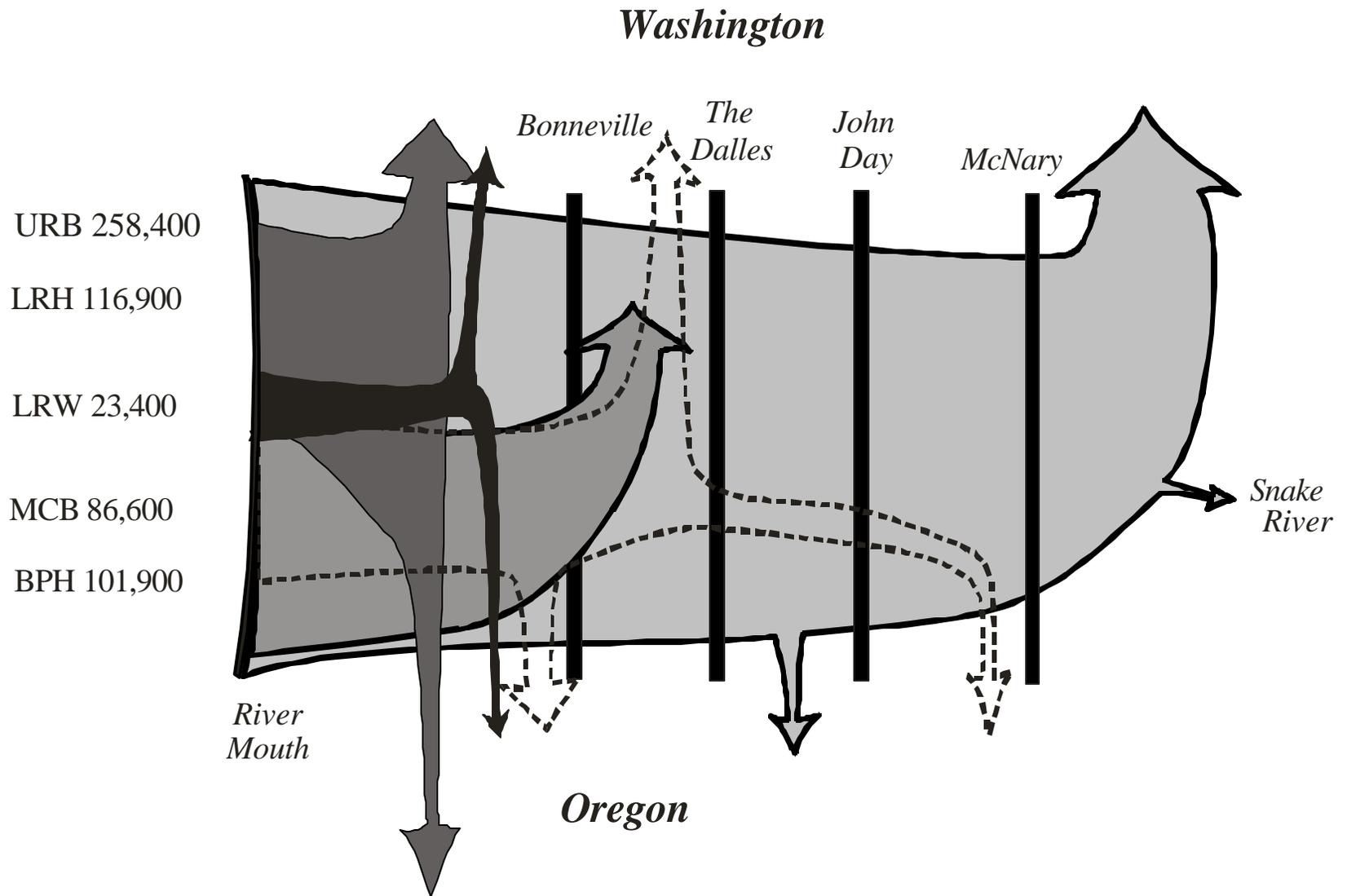


Figure 3. Stock Components of Columbia River Fall Chinook and 2003 Adult Pre-season Forecasts.

Upriver Summer Steelhead

Stock Description

Summer steelhead enter the Columbia River from March through October, with most of the run entering from late June through mid-September. The upriver steelhead run has historically been separated into A and B groups, which pass Bonneville Dam through and after August 25, respectively based on a distinct bi-modal run timing distribution; however, in recent years this bi-modal distribution has not been as distinct as it was historically. Group A steelhead include early-returning Skamania stock which pass Bonneville Dam prior to July and are primarily destined for Bonneville Pool tributaries. Group A steelhead also include non-Skamania stock which pass Bonneville Dam from late June through late August on their way to tributaries throughout the Columbia and the Snake River basins. Group B steelhead return to the Clearwater and Salmon rivers in Idaho and pass Bonneville Dam from late August through October. Group B steelhead are generally larger than Group A steelhead.

Group A and B steelhead cannot be distinguished based on run timing above Bonneville Dam, where groups mix as fish seek temporary refuge in cooler tributaries. Steelhead counts at dams above Bonneville surge as mainstem water temperature declines in the fall. Counts peak at John Day, McNary, and the Snake River dams in September and October. During years of above average September-October flows and lower temperatures, steelhead move readily past lower Snake River dams during the fall counting period (June-December) and fewer fish are delayed until the spring count period (March-May). Snake River steelhead experience higher Bonneville to Lower Granite Dam survival rates in run years with lower spring count percentages.

In 1999, the TAC completed a review of steelhead assessment methods for Bonneville Dam and Zone 6 fisheries in response to changes in run timing distributions. Upon review of recent passage data the TAC determined that smaller steelhead are still earlier timed at Bonneville Dam and larger steelhead are still later timed. During 1989-1999, an average of 78% of steelhead less than 78 cm fork length crossed Bonneville Dam prior to August 26 and 75% of steelhead greater than or equal to 78 cm fork length crossed Bonneville Dam after August 25. Although about 85% of steelhead found in certain Idaho streams are large (≥ 78 cm), the data is insufficient to make any definitive conclusions regarding the proportion of late-timed larger steelhead crossing Bonneville Dam that are destined for Idaho streams. The TAC concluded that separation using a 78 cm fork length criteria can be used as an index of Group A and Group B steelhead stock components; therefore, the TAC adopted a revised method of estimating fishery impacts to Group A and Group B steelhead using sampling data from Bonneville Dam (July 1-October 31) and fisheries data to estimate impacts for Group B (≤ 78 cm) and Group A (< 78 cm) index steelhead. Steelhead passing Bonneville Dam prior to July 1 are classified as Skamania index steelhead and steelhead passing Bonneville Dam after June 30 are classified into Group A and Group B index steelhead based on the aforementioned length criteria (Figure 4).

Steelhead are subject to sport fisheries throughout the basin and treaty Indian fisheries in Zone 6. In the Columbia River Basin above Bonneville Dam summer steelhead are caught in sport fisheries during the year of entry, and in the winter and spring of the following calendar year with catch regulations allowing only fin-clipped hatchery fish to be retained. Treaty Indian catch occurs throughout the year in platform and gillnet fisheries but most of the catch occurs during the fall gillnet fishery concurrent with landings of fall chinook. In recent years the tribes have reduced catch of wild steelhead during fall treaty Indian gillnet seasons. Commercial harvest of steelhead by non-Indians has been prohibited since 1975 and time, area, and gear restrictions limit handling and mortality of steelhead by the non-Indian gillnet fishery to $< 1\%$ of the run.

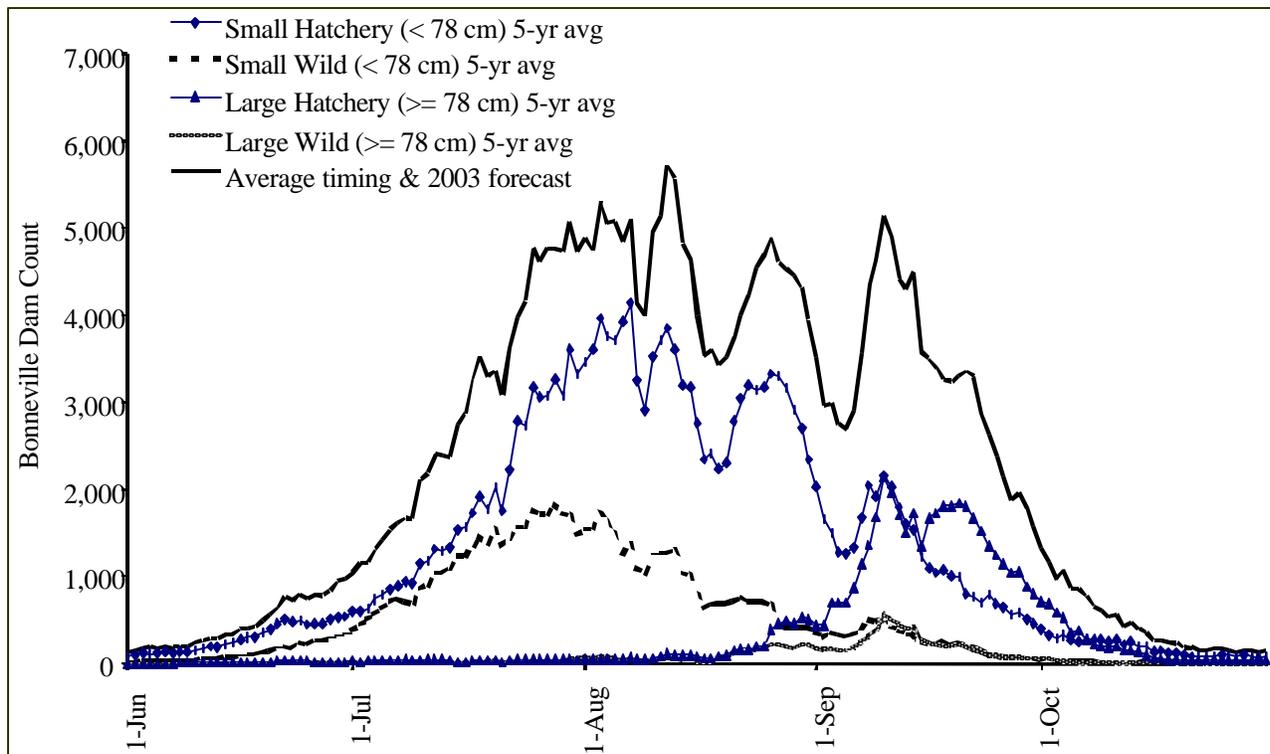


Figure 4. Average Run Timing of Summer Steelhead over Bonneville Dam (1997-2002) Applied to the 2003 Forecast.

2002 Returns

The 2002 upriver summer steelhead return of 478,000 past Bonneville Dam was the second largest return on record and was nearly 35% greater than the recent 5-year average of 354,500. Group A index steelhead hatchery (235,800) and wild (87,300) returns in 2002 were the second and third largest in the database, which dates back to 1984. The percent wild (27%) in the Group A index steelhead return was the fourth highest since 1989 and the fifth consecutive year in which the percent wild exceeded 25% (Table 5). The Group B index steelhead total (129,900), hatchery (97,600), and wild (32,300) returns in 2002 were all the largest on record. The wild component of the Group B index return was nearly nine times the 1993-1999 average of 3,800. The percent wild in the Group B index return was 25% which represented the highest percentage observed since 1987. During 2002 Bonneville passage occurring prior to August 26 included 49% 1-ocean fish and 50% 2-ocean fish and passage occurring after August 25 included 27% 1-ocean fish and 64% 2-ocean fish. The Lower Granite Dam count of 222,000 fish in 2002 included 57,600 wild steelhead, about 25% of the total count.

2003 Forecast

The 2003 forecast for the summer steelhead return to Bonneville Dam is 360,900 which would be smaller than the 2002 return of 478,000 but would still be the fourth largest return on record (Table 1). Run components based on the revised index method include 16,600 Skamania index fish, 279,600 Group A index fish, and 64,700 Group B index fish as compared to the recent 5-year averages of 17,400, 273,200, and 63,900, respectively. The wild fish forecast of 86,600 includes 4,500 Skamania index fish, 70,600 Group A index fish (25% of the Group A return), and 11,500 Group B index fish (18% of the Group B return).

Coho

Stock Description

Columbia River coho return primarily to Oregon and Washington hatcheries downstream from Bonneville Dam with some hatchery production destined for above Bonneville Dam. In recent years approximately one-third of the releases have occurred above Bonneville Dam. Since 1970 adult coho returns to the Columbia River have ranged from a low of 74,000 in 1995 to a high of 1,527,800 in 1986 (Table 6). The Columbia River coho return includes both early and late segments with commercial fisheries prior to mid-September landing primarily early stock, fisheries during mid-September through early October landing a mixture of early and late stock, and fisheries occurring after early October landing primarily late stock.

Early stock coho enter the Columbia River from mid-August to early October with peak entry occurring in early September. Almost all early stock coho remain along the Oregon and southern Washington coasts and most migrate southward from the Columbia River. Since 1970, adult returns of Columbia River early stock coho have ranged from a low of 43,400 in 1983 (*El Niño* year) to a high of 730,800 in 1986 (Table 7). In 2002, releases of early coho above Bonneville Dam comprised 36% of the total early stock releases.

Late stock coho enter the Columbia River from mid-September through December with peak entry occurring in mid-October. The majority of late stock coho migrate northward from the Columbia River and reside along the Washington coast and Vancouver Island. Hatchery production has expanded since 1975 and is primarily from Washington hatcheries below Bonneville Dam. In 2002, releases of late stock coho above Bonneville Dam comprised 41% of the total late stock releases. Since 1970, Columbia River returns of late stock coho have ranged from a low of 16,800 in 1995 to a high of 796,900 in 1986 (Table 8).

Historic natural coho production areas in Washington included the Grays, Elokomina, Cowlitz, Toutle, Kalama, Lewis, and Washougal watersheds. Stream surveys conducted in Washington from 1945-1979 in the Toutle and lower Cowlitz River tributaries showed a steady decline of naturally spawning coho. Significant natural spawning still occurs in the lower Cowlitz River system but is almost entirely composed of Cowlitz hatchery fish. Surveys of 37 Washington streams below Bonneville Dam in 1991 suggested that natural spawning continues but production is low. Surveys of the majority of Washington tributaries below Bonneville Dam were performed again in 1998. Results of the 1998 surveys indicated that natural spawning occurs at low levels over a wide variety of areas; however, the bulk of the spawners (>90%) appear to be hatchery fish.

In Oregon, Columbia River tributaries that were historic natural coho production areas include the Lewis and Clark, Youngs, Klaskanine, Clatskanie, Clackamas, and Sandy rivers plus Big, Gnat, Beaver, Milton, and Scappoose creeks. Annual spawning fish survey counts conducted in Oregon lower Columbia River tributaries from December through February since 1949 suggested that wild coho may have been extirpated from Oregon's lower Columbia tributaries, excluding the Clackamas and Sandy rivers. Intensive surveys conducted during 1990-1992 and counts of 0.0-0.4 fish per mile during 1993-1999 supported this conclusion; however, increased numbers of coho have been observed in lower Columbia River tributaries since 1999 which suggests that some remnant populations may persist in the lower Columbia River Basin (Table 9). Post-November peak fish counts of 8.8 fish per mile in 2000, 1.4 fish per mile in 2001, and 9.0 fish per mile in 2002 were all well above the 1990's average of 0.2 fish per mile but well below the 1949-1970 average of 25.1 fish per mile. In 2002 lower Columbia River surveys were

conducted by ODFW's Coastal Salmonid Inventory Project following their Coastal Salmon Spawning Survey Procedures Manual which enabled ODFW to produce total adult escapement estimates for the standard surveys using peak counts after November and area-under-the-curve methodology and this methodology produced an estimate for 2002 of 23 fish per mile.

The Clackamas and Sandy rivers still contain significant natural populations of coho. The naturally produced Clackamas coho run is destined for areas above North Fork Dam, and includes an early segment that originated from hatchery plants during 1960-1972 and a late segment that recolonized the upper river after 1939 when the Faraday Dam fish ladder was built. Coho presently pass North Fork Dam in a bimodal pattern with peaks in September and January, although only a unimodal pattern with a peak during November and December was apparent prior to 1960. Early and late run Clackamas coho pass through the lower Columbia River during September and November-December, respectively. Coded-wire tag (CWT) studies on the 1985-1987 broods indicated that late stock Clackamas coho contributed only 0-0.2% of 1988-1990 late fall commercial landings, with all landings occurring after mid-October. The Sandy River coho population passing Marmot Dam is primarily a wild population supplemented with some hatchery plants of adults and juveniles during 1961-1973 and 1979-1990. This run passes through the lower Columbia River primarily in September and passes Marmot Dam from early September through November with the peak in October. Historic passage at Marmot Dam occurred from late September through December. Since 1978, natural coho returns to the Sandy and Clackamas rivers have varied widely with very low returns observed during 1996-1999. Natural coho returns to the Clackamas and Sandy rivers increased significantly during 2000-2001, but declined again in 2002. Passage of 300 adults over Marmot Dam in 2002 was below the historic (1960-1969) average of 800 adults annually. The 2002 coho adult return past North Fork Dam on the Clackamas River totaled 1,000 which is similar to the low returns observed in the 1990's. The 2002 North Fork Dam coho count was comprised of 800 early stock adults and 200 late stock adults.

Historical natural coho production areas above Bonneville Dam include the Spokane, Yakima, Wenatchee, Entiat, Methow, and Snake rivers. The majority of coho presently passing Bonneville Dam are returns from Columbia River Fish Management Plan (CRFMP)-mandated hatchery releases of lower river coho stocks in the Yakima, Umatilla, Little White Salmon, Klickitat, and Clearwater rivers. In the past, these releases have primarily been for the purpose of harvest augmentation but the parties are also increasing efforts to restore naturally producing coho to appropriate habitats above Bonneville Dam, most recently the Snake and Methow rivers. Counts of coho destined for areas above Bonneville Dam have represented an increasing percentage of the total return in response to increased releases above Bonneville Dam. Since 1998 passage over Bonneville Dam has exceeded 40,000 adults with counts ranging between 40,700 in 1999 and 259,500 in 2001, which more than doubled the previous record of 108,600 in 1986 (Table 6). The 2002 Bonneville Dam count of 87,800 coho adults is the third highest count since 1986.

2002 Returns

The 2002 Columbia River coho return of 510,700 adults was comprised of 278,100 early stock fish and 232,600 late stock fish. The 2002 adult return was less than half the large 2001 return of 1,108,000 but was still much larger than the 1995-1999 average of 154,200 (Table 6). Observed trends were similar for both early and late stocks with 2002 returns being much larger than those observed during 1995-1999 (Tables 7 and 8). Overall, early and late coho aggregate and individual hatchery escapement goals were achieved in 2002.

2003 Forecast

The projected 2003 Columbia River mouth return, following expected ocean fisheries, is 429,000 adults, which includes 271,500 early stock and 157,500 late stock (Table 1). A total return of 429,000 would be the smallest return since 1998 but more than triple the average of 131,000 observed during the poor return years of 1993-1998. The early stock and late stock forecasts both greatly exceed the 1993-1998 averages of 95,000 and 36,000, respectively. Approximately 55,100 coho are expected to pass above Bonneville Dam after ocean and lower river fisheries. Hatchery escapement goals of 18,600 early stock and 11,900 late stock are expected to be achieved after all mainstem and tributary fisheries have occurred and some early and late stock coho are expected to be available for harvest in 2003.

Chum

Chum salmon return to the Columbia River during mid-October through mid-December, with spawning occurring in November and December. Chum returns are almost entirely from natural/wild production. Primary production areas for chum include the Grays River in Washington, smaller tributaries downstream from Bonneville Dam, and the mainstem Columbia River in the area from the I-205 Bridge upstream to Bonneville Dam. Limited hatchery releases also contribute to returns, which have fluctuated at low levels since the mid-1960's. Washington tributaries have been surveyed annually since 1950 and the mainstem Columbia River has been surveyed annually since 1998. Beginning in 2000, more intensive surveys were conducted and survey areas were expanded to include non-index streams in Washington and Oregon tributaries entering the Columbia River downstream of Bonneville Dam. Significant numbers of chum salmon were observed in non-index Washington tributaries; however, very few chum have been observed in Oregon tributaries. Chum returns, as indexed by counts of fish per mile, to Washington index areas in 2002 were the largest on record (since 1950), over seven times greater than the 1990s average, and over 1½ times greater than 2001 (Table 9). Chum are caught incidentally in the late fall non-Indian commercial fishery with landings typically occurring after mid-October. During 2002, chum landings totaled nine, of which eight were landed in late fall mainstem fisheries and one was landed in fall Select Area fisheries (Table 14).

Sturgeon

Both white and green sturgeon are present in the lower Columbia River. Green sturgeon originate primarily from the Klamath, Sacramento, and Rogue rivers and use the Columbia River estuary extensively during summer and early fall. Columbia River white sturgeon originate from spawning areas near Bonneville Dam and range seasonally up and down the lower Columbia River. Columbia River white sturgeon are also known to use near shore ocean waters along the Oregon and Washington coasts and contribute to populations in other coastal bays and estuaries. Columbia River sturgeon fisheries are designed primarily for white sturgeon. Green sturgeon are seldom caught by sport anglers but contributed significant commercial catches at times prior to 2001.

The current white sturgeon population is considered to be healthy with more than 1 million fish exceeding 2' in length. In general, indicators of sublegal (<42 inches) and oversize (>60 inches) abundance are good at this time. Population estimates produced during 1995-2001 indicate that the number of 42"-60" sturgeon in the population decreased about 4% annually instead of increasing at the rate the abundance models predicted. These results suggest the combined sport and commercial annual harvest rates exceeded levels considered to be adequate for broodstock

recruitment needs. There is evidence that the harvestable population was overestimated in 1996 due to extensive emigration of white sturgeon from the lower Columbia River. Tags recovered from outside the Columbia River basin indicated that this emigration began in 1995-1996 with the fish continually returning to the Columbia River since 1997. Managers use population abundance and fish growth rates to calculate appropriate harvest guidelines. Analysis of recapture data from 1985-2000 indicate that growth rates for white sturgeon slowed substantially in 1995, and have gradually returned to normal levels since. Managers now believe the harvest guidelines established for 1997-1999 and renewed for 2000-2002 did not fully allow for adequate recruitment of white sturgeon through fisheries into the broodstock population. In conjunction with the extension of the Joint State Sturgeon Management Agreement for 2003-2005 the white sturgeon annual catch guideline was reduced from 50,000 fish to 40,000 fish in response to this new information.

Isolated white sturgeon populations also exist in reservoirs upstream of Bonneville Dam. Abundance varies among populations and is limited primarily by lack of quality spawning habitat in each reservoir. The sturgeon populations in the three Zone 6 reservoirs are evaluated every three to five years to monitor the effects of hydro-system mitigation activities, which include quota management based on an optimum sustainable yield (OSY) harvest management strategy. Pool specific abundances of sturgeon 3-6 feet in total length are estimated using mark-recapture methodology, which results in abundance estimates of 45,600 in Bonneville (1999), 20,600 in The Dalles (2002), and 14,200 in John Day (2001) reservoirs. Managers normally project population growth based on abundance estimates and average fish growth rates; however, new data on fish growth rates indicate that white sturgeon in The Dalles and John Day pools are growing at slower rates than previously thought. The new growth rated data invalidated the abundance projection model managers previously used; therefore, abundance for each pool was not projected for 2003 as has been the case in past years.

MANAGEMENT GUIDELINES

Endangered Species Act

Status reviews occurring since 1991 have resulted in the majority of Columbia Basin salmon and steelhead stocks being listed under the ESA (Table 10). In order to facilitate consultations with the National Oceanographic and Atmospheric Administration (NOAA) Fisheries for past mainstem treaty Indian and non-Indian fisheries, the *U. S. v. Oregon* TAC has prepared biological assessments for combined fisheries based on relevant *U. S. v. Oregon* management plans and agreements. The TAC has completed Biological Assessments (BAs) of impacts to all ESA-listed salmonid stocks (including steelhead) for all mainstem Columbia River fisheries since January 1992 and for Snake River basin fisheries since January 1993. In 2003 a combined Indian and non-Indian Biological Assessment concerning fall fisheries has been submitted to the NOAA Fisheries but a Biological Opinion had not been received at the time this report was written.

The State of Oregon listed wild coho destined for Oregon tributaries of the lower Columbia River as an endangered species under Oregon state law in July 1999. The ODFW recently completed a management plan for state-listed wild coho. The management plan includes separate abundance based harvest matrices for ocean and freshwater fisheries and was adopted at the July 20, 2001 OFWC meeting. The harvest matrices provide separate maximum allowable fishery mortality rates for ocean and freshwater fisheries based on parental escapement relative

to full seeding and marine survival as indexed by the return rate of jacks per hatchery smolts released. For 2003, the combined ocean and freshwater fishery mortality rate should not exceed 29.2% of the pre-fishery ocean abundance and the freshwater fishing mortality rate should not exceed 11.5% of the run entering the Columbia River. Fisheries will be managed to limit impacts to state-listed coho through the use of area closures or mesh size restrictions as described in the "Late September Commercial Fisheries" section of this document (see page 33).

2003 Columbia River Salmon Management Guidelines

The CRFMP expired on July 31, 1999. A Management Agreement for upper Columbia River fall chinook, steelhead, and coho has been reached by all parties for fall fisheries occurring in 2003 and the following guidelines will be in place for the 2003 fall fishery management period.

- ✓ Allowable SRW fall chinook impacts in combined non-Indian and treaty Indian mainstem fisheries below the confluence of the Snake River for 2003 result in a 30% reduction from base period harvest rates. The corresponding impact rate is 31.29% of the aggregate URB run.
- ✓ The freshwater URB impact rate of 31.29% will be allocated 23.04% for treaty Indian fisheries and 8.25% for non-Indian fisheries; however, sharing of impacts could change based on inseason updates. Overall impacts will not exceed 31.29%.
- ✓ Treaty Indian fall fisheries will be managed to limit impacts on wild Group B index steelhead to no greater than 15%. All non-Indian fisheries outside the Snake River basin will be managed for an upriver wild steelhead impact rate to not exceed 2% on wild Group B index steelhead.
- ✓ Upriver fall chinook escapement goals include 7,000 adult fall chinook (4,000 females) to Spring Creek Hatchery and 43,500 adult fall chinook (natural and hatchery included) for spawning escapement above McNary Dam.
- ✓ Ocean and lower river fisheries will be managed to provide for Bonneville Dam escapement of at least 50% of the upriver coho salmon return.
- ✓ Non-Indian fisheries will be managed for an impact rate of less than 5% for Columbia River chum salmon.
- ✓ Based on the 2003 Incidental Take Permit issued by the OFWC combined ocean and freshwater fisheries will be managed to limit impacts on wild coho destined for Oregon tributaries to no more than 29.2% and the freshwater fishery impacts should not exceed 11.5% of the run entering the Columbia River.

2003 Non-Indian Columbia River Fall Fishery Chinook Allocation Agreement

This agreement was reached during a series of meetings occurring on March 18, March 20, and April 2, 2003.

- ✓ This agreement is limited by the non-Indian allocation of URB fall chinook impacts of 8.25% as per the 2003 U.S. v Oregon Fall Management Agreement. Non-Indian catch estimates are based on pre-season abundance forecasts referenced in Table 28.
- ✓ URB fall chinook impacts in fisheries downstream of the Snake River are allocated pre-season 52% (4.29%) to the sport fishery and 48% (3.96%) to the commercial fishery. The Columbia River Compact/Joint States will use this URB impact allocation as guidance for

making in-season management decisions concerning the Columbia River sport and commercial fisheries. Actual URB impacts in the fisheries may differ from pre-season estimates based on actual fishery catches, stock composition, and run size updates. The *U.S. v Oregon* TAC will update the URB run size beginning in mid-September.

- ✓ Expected total catch of fall chinook in the mainstem Columbia River downstream of the Snake River, in lower Columbia River tributaries, and Select Areas is 84,300 of which 41,400 (49%) are expected to be harvested by the sport fishery and 42,500 (51%) by the commercial fishery. These catch estimates are based on pre-season abundance forecasts and fishery estimates. Actual harvest sharing will be influenced by stock specific fall chinook abundances and relative harvest rates by each respective fishery.
- ✓ The Buoy 10 sport fishery is modeled at 77% of the chinook catch estimated for a full fishery. The fishery will begin on August 1 with a two fish daily limit; only one may be a chinook. Chinook retention will continue through at least Labor Day (September 1). Beginning August 16, the daily limit will increase to three fish; only one may be a chinook. URB impacts with this fishery are projected to be 1.56%, or 36% of the total sport impact of 4.29%.
- ✓ The mainstem sport fishery below Bonneville Dam is modeled at 90% of the chinook catch estimated for a full fishery to the end of the year (with a two fish daily limit), which is expected to provide enough chinook to continue the fishery through mid-September when URB run size and fishery updates occur. URB impacts associated with this fishery are 2.28%, or 53% of the total sport impact of 4.29%.
- ✓ Expectations for the commercial fishery include:
 - An early August salmon fishery up to 4 nights (modeled dates were August 5, 7, 11, 13). Mesh size is 8-inch minimum and area is below the Longview Bridge. URB allocation for this fishery is 0.76% (19% of the total commercial impacts of 3.96%) and total chinook catch expectation is 10,400 fish. Chinook/URB impacts not used in this fishery will transfer to future commercial fisheries.
 - Late August Zone 4-5 fishery during the last two weeks of August. Fishing is expected to occur up to 3 nights per week with breaks in between fishing days. Mesh size is 9-inch minimum and area is above the I-205 Bridge. URB allocation for this fishery is 0.83% (21% of the total commercial impact of 3.96%) and total chinook catch expectation is 6,500 fish. Chinook/URB impacts not used in this fishery will transfer to September fisheries.
 - Fishing areas and days in August fisheries may change based on in-season updates.
 - Late fall fishery to begin the week of September 14. Fishery to occur in as much of Zone 1-5 as possible and will include some target chinook fishing. Fishery will target coho or chinook as determined by remaining impacts and in-season run strength. The late September chinook harvest will be determined by the mid-September URB run size update and the actual URB impacts remaining that can be used by the commercial fishery.
 - Sturgeon management will be consistent with sturgeon protocol adopted at the February 6, 2003 Compact hearing (see page 21).

Lower Columbia River Sturgeon Allocation

Sturgeon fisheries between the Columbia River mouth and Bonneville Dam during 2003-2005 are guided by a management plan adopted by the Oregon and Washington Fish and Wildlife Commissions and the Columbia River Compact. Major tenets of the "Joint State Agreement on Sturgeon Fishery Management" include:

- ✓ Management for optimum sustained yield of white sturgeon.
- ✓ Absent significant update, annual harvestable number is 40,000.
- ✓ Harvestable number may be adjusted if there is a significant population update resulting from new biological information, new analytical/theoretical approach, or a substantial change in harvest impacts outside of the Columbia River system.
- ✓ Allocate white sturgeon harvestable number 20% commercial (8,000) and 80% sport (32,000).
- ✓ Sport and commercial seasons will be modified as necessary to ensure that average catch during the three-year period (2003-2005) does not exceed fishery specific harvestable number.
- ✓ Commercial target seasons allowed as necessary to access allocation and maximize economic benefit consistent with conservation objectives for other species.
- ✓ Green sturgeon may be taken during white sturgeon commercial seasons but green sturgeon-only commercial seasons are not allowed (green sturgeon catch rate not to exceed historical rates).
- ✓ Commercial size limits are 48-60 inches for white sturgeon and 48-66 inches for green sturgeon.
- ✓ Recreational size limit for white and green sturgeon is 42-60 inches with one fish daily limit, ten fish annual (per calendar year) limit, and barbless hooks required. A reduction in the annual limit from 10 to five will be considered during the summer of 2004.

Catch of white sturgeon in Select Areas is included in the annual commercial allocation of the harvestable number. Past management practices regarding white sturgeon catch in Select Areas have varied and were developed in consultation with participants of Select Area commercial fisheries. Prior to 1997 no catch limit restrictions were in place. Beginning in 1997, white sturgeon catch in Select Areas was limited to 5% of the commercial white sturgeon allocation and this limit was subsequently increased to 10% for 1998 and 1999. Sales of sturgeon were allowed in the Youngs Bay fisheries only prior to 1998, and in all Select Area fisheries thereafter. On April 12, 2000 commercial fishing industry leaders met to discuss the harvest of white sturgeon in Select Areas as it related to the commercial allocation and arrived at the following consensus points:

- 1) Select Area fisheries should be managed as salmon directed fisheries.
- 2) Use of gear (mesh size) restrictions should be adopted to target salmon, not sturgeon. New regulations should be phased in to limit economic impact on participating fishers. Based on a June 8, 2000 public meeting with interested participants in Select Area fisheries a 6-inch maximum mesh size was considered appropriate for coho-directed fisheries and a 7-inch to 8-inch maximum mesh size was considered appropriate for chinook directed fisheries.
- 3) Enforcement presence is encouraged to ensure compliance with gear restrictions.

Sturgeon retention regulations enacted during the fall of 2001 and 2002, a reduced commercial sturgeon allocation for 2003-2005, and increased salmon fishing opportunities resulted in an evaluation of recent commercial sturgeon fishery management practices. The Joint Staff met with the commercial fishing industry on December 2, 2002 and January 23, 2003 to discuss issues regarding white sturgeon retention in commercial fisheries during 2003-2005. The issue of white sturgeon retention during commercial fisheries was considered at the December 18, 2002 and February 6, 2003 Compact hearings and the Compact adopted the following protocol for management of white sturgeon retention in 2003-2005 commercial fisheries.

<i>Protocol for Management of White Sturgeon in 2003-2005 Commercial Fisheries</i>	
✓	Fisheries should be managed for white sturgeon catch expectations of 2,000 for the winter-summer timeframe (January-July), 2,000 for the early fall timeframe (August), and 3,600 for the late fall timeframe (September-October).
✓	Landings during SAFE fisheries are not to exceed 400 white sturgeon for the entire year with winter/spring/summer fisheries not to exceed 300.
✓	Allow some level of incidental sturgeon harvest to occur during all target salmon seasons.
✓	Conduct limited target sturgeon fisheries during winter and early fall timeframes if feasible.
✓	Conduct target sturgeon fisheries during October if necessary to access commercial allocation.
✓	Adopt white sturgeon possession and landing limits if necessary to remain within season specific catch expectation or to provide white sturgeon for harvest during subsequent salmon seasons.
✓	Until further discussion occurs with the OFWC and the WFWC regarding sturgeon allocation among individual commercial fishers landings and possession limits will be in the form of per vessel limits and these limits will include both mainstem and Select Area fisheries.
✓	Joint Staff will conduct an annual post season evaluation of white sturgeon retention with industry.

Zone 6 Sturgeon Allocation

Sturgeon catch guidelines and sport/treaty commercial allocations have been reviewed annually since 1987 by the Sturgeon Management Task Force (SMTF), which is comprised of representatives from state fish management agencies and the Columbia River treaty Indian tribes. Guidelines are based on desired harvest rates and current stock assessments. In March of 1997, the SMTF agreed to pool-specific management with catch guidelines, based on OSY, that are designed to allow for survival of adequate numbers of juvenile sturgeon through existing fisheries to increase harvestable and broodstock numbers. Current sturgeon size limits are 48-60 inches in all treaty Indian fisheries, 48-60 inches in sport fisheries in The Dalles and John Day reservoirs, and 42-60 inches in the Bonneville Reservoir sport fishery.

Sturgeon catch guidelines remained stable for all three pools during 1998-2001 as updated stock assessments indicated that these sturgeon populations were rebuilding under the catch restrictions implemented by the SMTF; however, stock assessments conducted in 2001 and 2002 documented population declines in John Day and The Dalles pools (Table 11). Managers use population abundance estimates and fish growth rates to calculate appropriate harvest guidelines. Analysis of recapture data in 2001 and 2002 indicate growth rates for white sturgeon in John Day and The Dalles pools were substantially slower than initially thought. Managers now believe the previous harvest guidelines did not allow adequate recruitment through fisheries into the broodstock populations.

In 2003 new catch guidelines were adopted for The Dalles and Bonneville pools while the guideline for John Day Pool remained unchanged from 2002. The catch guideline for the John

Day Pool was reduced significantly from 1,720 (560 sport and 1,160 treaty commercial) to 500 (165 sport and 335 treaty commercial) in 2002 based on the recent population assessment. The new catch guidelines for 2003 were based on the recent population assessment for The Dalles Pool with modifications to the sharing formula between treaty Indian and sport fisheries for The Dalles and Bonneville pools. The sharing ratio between treaty Indian and sport harvest changed from 61%:39% to 69%:31% for the Dalles Pool and from 46%:54% to 41%:59% for Bonneville Pool. The guidelines for treaty Indian fisheries were reduced to 900 white sturgeon for The Dalles Pool and 1,200 white sturgeon for Bonneville Pool while sport guidelines were decreased to 400 white sturgeon for The Dalles Pool and increased to 1,700 white sturgeon for Bonneville Pool. The changes in the Bonneville Pool treaty Indian and sport guidelines were adopted to offset the greater decrease in the sport guideline for The Dalles Pool and maintain an approximate 50:50 allocation between sport and tribal fisheries for all three pools combined. Treaty Indian fishers may continue to take sturgeon for subsistence purposes after commercial seasons have been completed. Subsistence catch is estimated through a monitoring program conducted by the Yakama Nation (YN) and annually averages less than 300 sturgeon. Subsistence catch is not included in the aforementioned catch guidelines. Sport anglers may continue to fish for sturgeon and release them unharmed when catch guidelines are reached and retention is prohibited.

REVIEW OF MAINSTEM FISHERIES

Past Seasons

Traditional commercial fisheries below Bonneville Dam occurred during "early fall" (August to mid-September) targeting on chinook and "late fall" (mid-September to mid-November) targeting on coho (Figure 5). Coho typically outnumbered chinook in the late fall season catch and in some years by a wide margin; however, chinook landings could be significant during the mid-September time frame. Incidental landings of steelhead occurred in both early and late fall seasons until commercial sale of this species was banned in 1975.

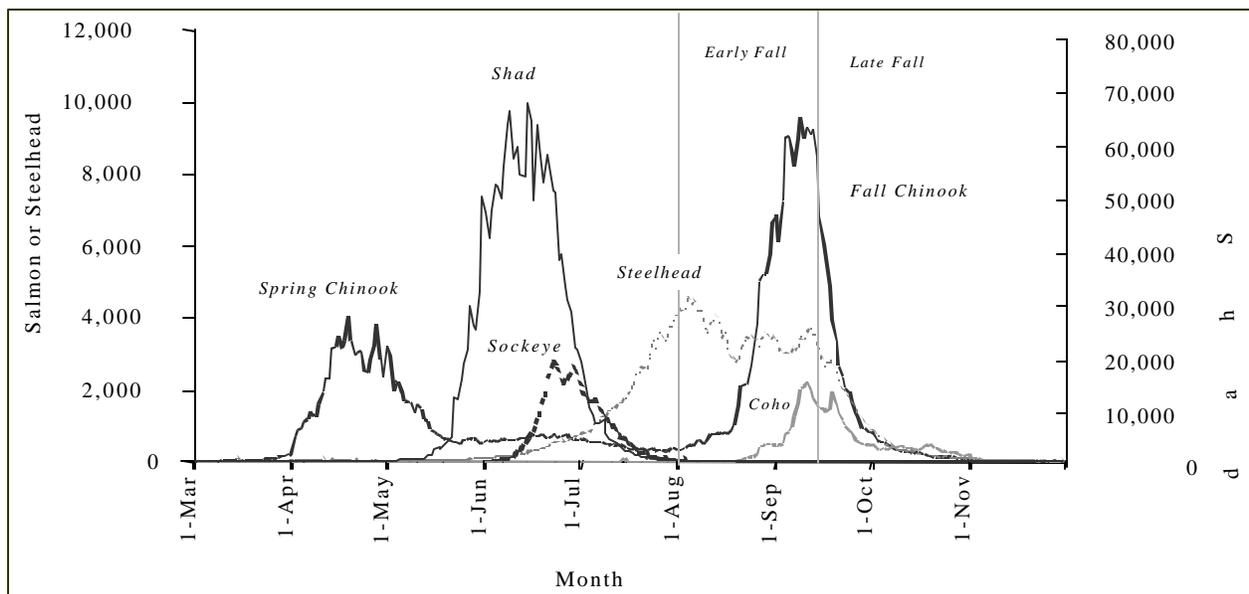


Figure 5. Average Daily Counts of Salmon and Shad at Bonneville Dam, 1986-2002.

In recent years, commercial fisheries below Bonneville Dam during the fall fishing period were reduced in response to the decreasing abundances of target species and ESA listing decisions. Mesh size restrictions were frequently imposed on both the early fall and late fall segments of the non-Indian commercial fishery to reduce the incidental catch of non-target species. Commercial fisheries were also frequently restricted to zones or daylight only time periods to concentrate on target stocks or avoid non-target stocks. Early fall fisheries typically occurred during the last half of August, primarily in Zones 4-5 (upstream of the Sandy River mouth or the I-205 Bridge) near Bonneville Dam. These fisheries target on chinook with some sturgeon and a few coho also landed. Recently seasons also occurred during the first half of August in Zones 1-3 (mouth to Longview Bridge). These early August seasons targeted sturgeon initially, but in recent years were expanded to target either chinook salmon and white sturgeon with some coho being landed also. Late fall seasons typically occurred from mid to late September through the end of October. The majority of the seasons targeted coho in the lower river below the mouth of the Lewis River. Some target chinook seasons also occurred during mid to late September in Zones 4-5 (upstream of the I-205 Bridge). During several years in the 1990's extremely low coho abundance curtailed nearly all commercial opportunities during the fall fishing period.

With the reduction in non-Indian commercial salmon fishing opportunities in the late 1990's, and the adoption of Joint State Sturgeon Management Agreements beginning in 1997, target sturgeon fisheries became an important part of fall fishing strategies. Sturgeon sales were typically allowed during salmon seasons unless the catch guideline was reached, as occurred in 2001. Target sturgeon seasons were adopted to allow the commercial fishery to access the commercial allocation. During 1997-2001 target sturgeon seasons occurred during the first week of August and the last three weeks of October, except for 2001 when sturgeon retention was prohibited in all commercial fisheries after the catch guideline was reached in late August. Sturgeon fishery management during the fall of 2002 changed considerably from recent practices due to the limited number of sturgeon remaining on the commercial white sturgeon allocation. No target sturgeon fishery occurred in August for the first time since 1997, and as was the case in 2001 no target sturgeon fisheries occurred in October. Additionally, in 2002 a daily and weekly sturgeon possession and sales limits were adopted for the first time ever. Adopted regulations concerning sturgeon possession and sales varied throughout the season and included the following regulations:

- 1) Unrestricted sales of legal size sturgeon were allowed for fisheries where gear used consisted of unslackened floater gill nets with a maximum mesh size of 6 inches.
- 2) A five white sturgeon per vessel per day possession and sales limit was adopted for fisheries where gear used included gillnets with a mesh size that ranged between 8-9 $\frac{3}{4}$ inches.
- 3) A 15 white sturgeon per vessel per week possession and sales limit was adopted in conjunction with the five fish daily limit during late October.
- 4) No sturgeon sales allowed regardless of gear used in the fishery.

Commercial fishing in off-channel areas (Select Areas) was initiated in 1962 with the adoption of salmon seasons for Youngs Bay. Initially, Youngs Bay seasons were concurrent with the late fall mainstem gillnet season; however, since 1977 the Youngs Bay season has been separated from mainstem seasons and has increased in importance with the involvement of the Clatsop County Economic Development Council's (CEDC) Fisheries Program. The CEDC fisheries program pioneered the successful net-pen acclimation program that is now a cornerstone of Select Area fisheries projects.

Recent declines in mainstem fishing opportunities and success of the Youngs Bay fishery prompted the Bonneville Power Administration (BPA) to fund a research project to expand net-pen programs into select off-channel fishing areas. This BPA funding now supports the Select Area Fishery Enhancement (SAFE) Project which was expanded to include Tongue Point/South Channel and Blind Slough/Knappa Slough on the Oregon shore plus Deep River and Steamboat Slough on the Washington shore. These fisheries targeted primarily hatchery coho returning to release sites in these areas; however, SAB fall chinook were also released and subsequently caught upon their return to Youngs Bay. In recent years coho fisheries occurred in all five Select Areas while chinook fisheries were limited to Youngs Bay or Blind Slough. Select Area fisheries targeting coho were typically initiated in early September and ran through the end of October. Limited chinook target fishing seasons typically occurred in Youngs Bay, one day per week during July and August, to target hold-over spring chinook and early returning SAB fall chinook. A target chinook fishery occurred intermittently in Knappa Slough near the mouth of Big Creek when surplus coho or tule fall chinook were expected to return to Big Creek Hatchery.

Treaty Indian commercial seasons above Bonneville Dam traditionally opened during early to mid-August and ended in mid-October. Fall chinook and steelhead dominated the catch, but substantial numbers of white sturgeon and coho could be landed also. In recent years commercial fishing opportunities in the Zone 6 management area also declined. Recent fisheries have typically occurred during a four or five week period between mid-August and late September. Fisheries continued to target on chinook but were modified to reduce impacts on listed wild steelhead. Zoning has also been used at times to increase escapement of some segments of fall chinook runs and more recently mesh size restrictions have sometimes been adopted for the treaty Indian fishery to limit steelhead catch. Most recently fall fisheries have been closed for white sturgeon because catch guidelines have been achieved prior to August 1.

A mainstem recreational fall chinook fishery exists in much of the Columbia River. In recent years, primary catch areas for fall chinook have been the lower estuary (Buoy 10), the lower river between Astoria and Bonneville Dam, and the Vernita-Hanford Reach area below Priest Rapids Dam. Small recreational fisheries for chinook also occurred at tributary mouths in the Zone 6 management area. Significant numbers of coho were landed in the Buoy 10 fishery with limited coho catches occurring in the mainstem Columbia River above the Astoria-Megler Bridge. Hatchery steelhead fisheries in the mainstem Columbia River occurred primarily between Tenasillahe Island and Bonneville Dam with few steelhead caught below Tenasillahe Island. Significant steelhead landings also occurred during sport fisheries above Bonneville Dam, especially near tributary mouths.

2002 Fall Season Summary

- ✓ Fall seasons and catches are summarized in Tables 12 - 18.
- ✓ The fall chinook run was the third largest since 1948 while the coho return was about half of the near record large return in 2001. The wild Group A index steelhead return was the third largest on record (since 1984) and the wild Group B index steelhead return was the largest on record (since 1984).
- ✓ All fisheries were constrained to remain within Management Agreement and ESA limitations. Post-season impacts totaled 28.02% for URB fall chinook (31.29% guideline) and 7.3% for wild Group B index steelhead (17.0% guideline).

- ✓ Actual Oregon wild coho fishery impacts of 13.3% was within the 15% limit identified in the 2002 state ESA Incidental Take Permit issued by the OFWC. Columbia River fisheries accounted for an impact rate of 2.2% as compared to the 3.7% impact limit.
- ✓ Treaty Indian fisheries landed 130,600 chinook and the 141,700 chinook adults passing McNary Dam greatly exceeded the escapement goal of 43,500.
- ✓ Lower river mainstem commercial fisheries focused on coho and harvestable chinook stocks while minimizing impacts on ESA-listed species. No target sturgeon fisheries were adopted and all sturgeon landed during fall seasons were incidental during target salmon fisheries.
- ✓ Lower Columbia River mainstem fall commercial fisheries landed an estimated 94,900 coho, 34,900 chinook, 5,900 white sturgeon, 156 green sturgeon, and 13 chum.
- ✓ Select area fall landings totaled 8,600 chinook, 69,300 coho, 334 white sturgeon, and one chum.
- ✓ The Buoy 10 sport fishery was open to the retention of chinook from August 1-December 31 with a two chinook bag limit in effect prior to August 24 and a one chinook bag limit in effect thereafter. No other additional fishery management action was required in 2002.
- ✓ The lower Columbia River sport fishery remained open during August 1-December 31 with a two fish salmon/steelhead bag limit in effect throughout.
- ✓ White sturgeon catches totaled 9,600 in the non-Indian commercial fishery and 38,300 white sturgeon in the lower Columbia River sport fishery as compared to their respective catch guidelines of 9,800 and 38,500 that were in effect for 2002.
- ✓ White sturgeon retention regulations during the fall of 2002 varied from no restrictions during coho target fisheries to no retention allowed during chinook target fisheries with 2002 being the first time that daily or weekly sales and possession limits have been applied to the Columbia River commercial fishery. The lower Columbia River sport fishery was closed on Sundays and Mondays during March 3-May 13 and seven days per week during July 25-November 22 to ensure that catches did not exceed the 38,500 fish catch guideline.
- ✓ A total of 12 Compact hearings were held between the dates of August 2 and October 24 to make commercial fishery management decisions. Joint State action was taken at three Compact hearings, Oregon state action was taken at one hearing, and two Joint State hearings were held to consider modifications to sport fishing seasons.

Zone 6 Fisheries

During the fall, fisheries in the mainstem Columbia River between Bonneville and McNary dams included treaty Indian commercial and ceremonial and subsistence (C&S) fisheries, recreational sturgeon fisheries, and limited fall chinook and steelhead sport fisheries focussing around tributary mouths. All fisheries that occurred in this section of the Columbia River were managed in accordance with predetermined harvest impact rates or catch guidelines. Landings during 2002 fall seasons are summarized in Table 14.

Treaty Indian Commercial Fishery

The treaty Indian commercial fishery in the fall of 2002 was managed to target on healthier URB and BPH fall chinook stocks while allowing some harvest of hatchery summer steelhead and limiting impacts on listed SRW fall chinook and Group B index summer steelhead. The

commercial set gillnet salmon fishery consisted of five fishing periods: four 3 ½ day fishing periods and one 4 ½ day fishing period (Table 12). The set gillnet fishery began with excellent chinook catches through the first four fishing periods, especially during the second and third weeks when a total of 73,300 chinook were landed during the two 3 ½ day fishing periods (Table 14). Based on an expected large return of BPH fall chinook, the large sanctuary around Spring Creek Hatchery was reduced to 150 feet. All other standard dam and river mouth sanctuaries were in effect and all of Zone 6 was open throughout the duration of the fall salmon season, as occurs in most years. The tribes utilized an 8-inch minimum mesh size restriction to limit handle of listed steelhead and primarily in response to low steelhead prices. Aerial counts of nets being fished indicated that effort was similar to 2001 with total daily net counts ranging between 306 and 436 per flight.

The 2002 fall commercial salmon season consisted of 18.5 fishing days occurring between August 28 and September 28 and resulted in catches of 130,195 chinook, 12,481 steelhead, and 1,599 coho, of which 26% of the chinook (33,900 fish) and 24.5% of the steelhead (3,400 fish) were taken home or sold directly to the public (Table 16). Total fall season harvests, including C&S landings, were 130,622 chinook, 13,761 steelhead, and 1,649 coho. The 18.5-day season was similar in length to the last five years but far less than in the late 1980's when season lengths ranged from 35-46 days. The chinook catch of 130,622 represents a continued improvement over the recent 5 and 10-year averages of 70,100 and 54,800, respectively and was similar to the strong return years of 1986-1989 when catches averaged 128,700 annually (Table 20). The URB fall chinook impact rate of 20.68% was less than the 23.04% impact rate set forth in the 2002 Fall Management Agreement (Table 18).

The total catch of 13,761 summer steelhead in all treaty Indian fall season fisheries included 2,370 Group A wild index steelhead and 1,098 Group B wild index steelhead. The 2002 total catch was less than the recent 5-year average of 19,500 and far less than the strong return years of 1984-1989 when catches averaged 63,900 steelhead annually (Table 20). Stock specific impact rates were 2.4% on wild Group A index steelhead and 3.4% on wild Group B index steelhead (Tables 18 and 21). The 3.4% impact rate on wild Group B steelhead was considerably less than the ESA impact limit of 15%.

Sturgeon Fisheries

Treaty Indian fisheries had reached the sturgeon catch guideline for the John Day Pool prior to initiation of the fall fishing period (Table 20). Although the catch guidelines for the Bonneville and The Dalles pools had not been reached the tribes chose not to allow sales of sturgeon during fall commercial salmon fisheries. Instead, retention of sturgeon was allowed for subsistence purposes and in commercial sturgeon fisheries adopted after completion of fall salmon fisheries. After completion of winter/spring/summer fisheries an estimated 913 and 79 white sturgeon remained on the Bonneville and The Dalles Pool catch guidelines, respectively; therefore, sturgeon setline seasons were adopted in Bonneville and The Dalles pools following the completion of the fall salmon fishing seasons. The setline fishery began 6 am October 1 and continued through 6 pm October 27 in The Dalles Pool and 6 PM December 15 in Bonneville Pool. Landings during October through December totalled 108 white sturgeon for Bonneville Pool and 101 in October for The Dalles Pool. White sturgeon commercial landings in treaty Indian fisheries totaled 1,950 fish in 2002 (Table 22).

Prior to the initiation of the fall management period (August 1) the sport catch sturgeon guideline in The Dalles Pool had been reached and retention in The Dalles Pool was disallowed by state action effective July 13. Shortly into the fall management period the sport catch guidelines for

Bonneville and John Day pools were also reached and sturgeon retention was disallowed in Bonneville Pool effective August 5 and in John Day effective August 24. Annual white sturgeon catches by pool are summarized in Table 22.

Lower River Commercial Fisheries

Commercial fisheries in the mainstem Columbia River below Bonneville Dam are generally divided into early fall (August through mid-September) fisheries focussing on fall chinook and white sturgeon and late fall (late September through early November) fisheries focussing primarily on hatchery coho and white sturgeon. Select Area commercial fisheries occurred in off-channel mainstem areas, or bays and sloughs at tributary mouths, and focused on fish returning from net-pen releases in these areas. The Select Area fisheries generally occurred from early September through October and focused primarily on coho with chinook landed in some fisheries. All non-Indian fisheries were managed in accordance with predetermined harvest impact rates or catch guidelines; however, Select Area fishery impacts on listed fish were negligible and the adopted seasons were seldom modified in-season. Landings during 2002 fall seasons are summarized in Table 14.

Early Fall Mainstem Fisheries

The lower river commercial fishery during the early fall of 2002 was managed to harvest chinook and a limited amount of sturgeon. The early fall season consisted of four 12-hour target chinook fishing periods the nights of August 4, 6, 8, and 9 below Longview Bridge (Zones 1-3); a 12-hour target chinook fishery the night of August 11 from the Tongue Point/Rocky Point line upstream to the Lewis River/Warrior Point line (Zones 2-3); and five 10-hour periods of target chinook fishing above the I-205 Bridge (Zones 4-5) between August 18 and August 28 (Tables 12 and 21). A five white sturgeon per vessel per fishing period possession and sales limit was in effect during the first three nights of August and during all five periods above the I-205 Bridge. No sales of sturgeon were allowed during the nights of August 9 and 11 and no green sturgeon sales were allowed during all early fall fishing periods. Landings in early fall fisheries totaled 1,340 white sturgeon, five coho, and 5,500 chinook in the first three nights of the Zones 1-3 target chinook fishery; one coho and 1,550 chinook in the fourth night of the Zones 1-3 chinook target fishery; three coho and 890 chinook in the Zones 2-3 target chinook fishery; and 52 coho, 11,570 chinook, and 380 white sturgeon in the Zones 4-5 target chinook fishery (Table 14). The total catch of 19,500 chinook during early fall fisheries was 78% of the preseason expectation of 25,100 and white sturgeon landings of 1,730 during the early fall fishing period were less than the preseason guideline of 2,000 fish (Table 22). The newly adopted sturgeon possession and sales limits were effective at limiting white sturgeon catch and providing an opportunity for sales of sturgeon to continue throughout the majority of the early fall salmon fishery. An early fall season length of 10 fishing days is improved over recent years; however, effort in the Zones 1-3 fishery dropped in half during the two nights when sturgeon sales were prohibited. Season lengths averaged six days annually during the stronger run years of 1986-1990 and 11 days annually during the more heavily fished time period of 1970-1975. The 19,500 chinook landed during early fall seasons was the second largest total since 1989 but was well below 1970-1975 when total chinook landings ranged between 51,700-142,100 and averaged 95,600.

Late Fall Mainstem Fisheries

The lower Columbia River commercial fishery operating during the late fall fishing time frame of 2002 was managed to harvest primarily coho and fall chinook while minimizing impacts on

listed species (Tables 12 and 15). The late fall fishery began on September 16 with two days of target coho fishing below Longview Bridge (Zones 1-3) and one night of target chinook fishing above Lewis River/Warrior Point line (Zones 4-5). Fishing regulations for Zones 1-3 included daylight hours of 7 AM-7 PM and a 6-inch maximum mesh size restriction to target coho salmon while fishing regulations for Zones 4-5 included nighttime hours of 7 PM-7 AM and an 8-inch minimum mesh size restriction to target fall chinook salmon. On September 23, with lower than expected catches of chinook and an upgraded fall chinook run size, an additional 36-hour fishing period was set during September 24-26 for all Zones 1-5 (except the closed area from the Longview Bridge upstream to Warrior Rock) and a 12-hour night period was set for September 26 above the Lewis River/Warrior Point line (Zones 4-5). The 6-inch minimum mesh size restriction was eliminated for Zones 1-3 to allow fishers to target either coho or fall chinook salmon while the 8-inch maximum mesh size restriction remained in effect for Zones 4-5 to target fall chinook and limit impacts to state-listed coho salmon. The five white sturgeon possession and sales limit was also put in place during the 36-hour period in Zones 1-5 while no sales of sturgeon were allowed during the 12-hour period in Zones 4-5 with the intent of providing sturgeon for harvest into October. Landings totaled 34,000 coho, 9,400 chinook, 680 white sturgeon, 13 green sturgeon, and one chum during the first two weeks of the season. The season continued with four nights during September 30 through October 9 in Zones 1-5 with no minimum mesh size restriction below the Lewis River/Warrior Point line and an 8-inch minimum mesh size restriction above. The five white sturgeon possession and sales limit also remained in effect. Landings totaled 39,600 coho, 4,100 chinook, 1,170 white sturgeon, 60 green sturgeon, and one chum during these four nights. The last portion of the season consisted of three continuous fishing days per week for three weeks beginning October 14 and ending October 31 with no minimum mesh size restriction in effect. During the final week of the season the downstream fishing boundary was moved upstream to the Harrington Point/Settler Point line. The sturgeon possession and sales limit included a daily maximum of five and weekly maximum of fifteen for the first two weeks and no sturgeon sales were allowed during the last week (Table 23). The final fall fishing periods resulted in landings of 21,250 coho, 1,930 chinook, 2,340 white sturgeon, 80 green sturgeon, and nine chum (Table 14).

Fall fisheries were managed to minimize impacts on federally-listed chinook, chum, and steelhead plus state-listed wild coho destined for Oregon tributaries. Management actions taken during late fall fisheries to minimize the interception of wild coho and chum salmon destined for lower Columbia River tributaries included the area between the Longview Bridge and the Lewis River/Warrior Point line was closed during September 16-27 to protect state-listed coho; an 8-inch minimum mesh size restriction was in effect for the area above the Lewis River/Warrior Point line during September 19-October 10 to protect state-listed coho; the area downstream from Harrington Point at the upper end of Grays Bay across to Settler Point near the lower end of Svensen Island was closed during October 28-31 to protect chum and state-listed coho; and the area upstream from the Green Navigation Marker 85 on the Washington shore to the Oregon shore at River Mile 140 was closed during October 28-31 to protect listed chum salmon (Table 23).

In 2002 late fall mainstem fisheries consisted of a total of 21 days occurring between September 16 and October 31 and resulted in catches of 94,810 coho, 15,450 chinook, 4,190 white sturgeon, 160 green sturgeon, and 13 chum (Table 24). The season length of 21 days for late fall fisheries was the same as the recent 5-year average, but still less than the strong return years of 1985-1989 when season length averaged 39 days annually. The late fall season coho catch of 94,800 fish was the third highest since 1991 but only 10% of the record high catch of nearly one million fish

in 1986. Poor price to fishers for coho continued in 2002 and limited overall coho fishing effort and landings. Chinook catches during late fall seasons exceeded 10,000 fish in 2001 and 2002 for the first time since 1993 as compared to 1970-1993 when catch exceeded 10,000 fish in 21 of the 24 years and peaked in 1987 with a catch of nearly 300,000 fish. In 2002, a total of 13 chum were landed during late fall seasons which was below the recent 5-year average of 60 and well below the 1970-1989 average of 1,060. Due to restrictive sturgeon catch guidelines, 2002 late fall sturgeon catches of 4,700 were similar to 1999 and 2000 (sturgeon retention was prohibited during 2001) but below the 1994-1998 average of 7,000 (Table 26).

Select Area Fisheries

Select Area fisheries occurring during the fall time frame of 2002 were managed to harvest primarily hatchery or net-pen reared coho and chinook salmon. Select Area fisheries are managed to have minimal impacts on listed species and have occurred in Youngs Bay since 1962; Tongue Point/South Channel, Blind Slough/Knappa Slough, and Deep River since 1996; and Steamboat Slough since 2000. Catch totals for the five Select Area fisheries during the fall of 2002 were very good with landings of 8,558 chinook (highest since 1988), 69,266 coho, (highest since 1991), one chum, and 334 white sturgeon (Table 14).

As has been the pattern in recent years, the fall Youngs Bay Select Area fishery began in early August with weekly fishing periods through Labor Day followed by continuous fishing through the end of October (Table 13). A total of four 30-hour fishing periods during August were intended to harvest net-pen produced SAB fall chinook and early returning coho without jeopardizing SAB fall chinook broodstock needs at Klaskanine Hatchery. To ensure adequate escapement, the upper fishing boundary was moved downstream from the confluence of Youngs and Klaskanine rivers to Battle Creek Slough beginning in August. The season included 58 consecutive days of fishing from September 3 through October 31 with the intent of harvesting late returning SAB fall chinook and 100% of the surplus hatchery origin coho whose abundance peaks in mid-September (Table 15). The 66-day fishing season resulted in a catch of about 3,800 chinook, 51,900 coho, and 100 white sturgeon (Table 14). The chinook catch equaled the pre-season expectation of 3,600 chinook while the coho catch was four times the pre-season expected harvest of 13,000 coho.

As has been the case since 1999, the Tongue Point/South Channel fishery began immediately after Labor Day (September 3) in the Tongue Point fishing area only during the first two weeks and was subsequently expanded to include the South Channel fishing area beginning September 16. The fishery was initiated with three nightly fishing periods during September 3-6 and continued with four nightly periods per week during the remainder of September and most of October (Table 13). The fishing area was limited to the Tongue Point area only during the first two weeks to minimize catch of nonlocal fall chinook whose abundance peaks in the lower river in early September. Subsequent expansion of the fishery into the South Channel area was adopted in an effort to catch 100% of the coho produced from the Tongue Point net pens. As days grew shorter and both available daylight and recreational fishing activity decreased the nightly fishing hours were expanded from 12 to 14 hours effective September 30 in an effort to harvest 100% of the net-pen reared coho (Table 15). The 34-night season, which began on September 3 and concluded on October 31, resulted in landings of approximately 1,700 chinook, 15,600 coho, and 200 white sturgeon (Table 14). The coho catch was 5½ times the pre-season expectation of 2,700 fish. Landings from the Tongue Point/South Channel area are included in mainstem landings when the mainstem is open.

The season structure of the Blind Slough/Knappa Slough fishery was similar to that used in the Tongue Point/South Channel fishery except that the entire fishing area was opened throughout the season to maximize harvest of Big Creek tule fall chinook as well as Blind Slough net-pen reared coho. The fishery was initiated with three 12-hour nightly fishing periods during September 3-6 and continued with four nightly periods per week during the remainder of September and most of October (Table 13). Beginning September 30, nightly fishing hours were expanded to 14 hours in an effort to harvest 100% of the net-pen reared coho (Table 15). The 34-night season, which began on September 3 and concluded on October 31, resulted in landings of approximately 2,800 chinook, 1,400 coho, and 30 white sturgeon (Table 14). The coho catch was less than the pre-season expectation of 2,300 fish, likely an artifact of known poor fish health at release. Landings of chinook in Knappa Slough were far below preseason expectations of up to 20,000 fish probably due to limited effort created by a weak market for this grade of fish.

The structure of the Deep River fishery was similar to that used in the Tongue Point/South Channel and Blind Slough/Knappa Slough fishing areas with nightly fishing periods occurring each week from September 3 through October 31. The fishery consisted of three 12-hour nightly periods during the first week of September, four nightly fishing periods weekly through October 25, and concluded with a 3-night period during the last week of October (Table 13). Fishing periods were lengthened to 14-hours beginning September 30 in response to shorter days (Table 15). The 34-night season, which began on September 3 and concluded on October 31, resulted in landings of about 150 chinook and 300 coho (Table 14). The coho catch was well below the pre-season expectation of 4,400 fish.

The season structure for the Steamboat Slough fishery was identical to the other fishing areas, except Youngs Bay, with fishing occurring from September 3 through October 31 (Tables 13 and 15). The 34-night season resulted in landings of 100 coho and 200 chinook salmon (Table 14). Actual coho harvest was far below the preseason expectations of 2,000 fish. The lack of catch in Washington shore Select Area fisheries may be attributed to better fishing opportunities occurring in other select fishing areas and the mainstem Columbia River, and catches being included in mainstem landings when both seasons were open concurrently.

Lower River Recreational Fisheries

Recreational salmon fisheries below Bonneville Dam are segregated into two distinct fisheries. The Buoy 10 sport fishery catches fall chinook and coho in the area from Buoy 10 upstream to a line between Tongue Point on the Oregon shore and Rocky Point on the Washington shore. The lower Columbia River mainstem sport fishery catches fall chinook, coho, and steelhead in the area from the Tongue Point/Rocky Point line upstream to Bonneville Dam. During 1982-1998 the Astoria-Megler Bridge marked the boundary between the Buoy 10 and mainstem fishing areas. Catch rates and catch composition in the area between the Astoria-Megler Bridge and Tongue Point were more similar to those in the Buoy 10 fishery, and in 1999 the upstream boundary of the Buoy 10 fishery was moved to the Tongue Point/ Rocky Point line for management purposes. Both fisheries are intensively managed to ensure that impact limits on listed species are not exceeded. Sport fisheries for coho and steelhead are restricted to adipose fin-clipped hatchery fish only with regulations in effect that require all nonadipose fin-clipped coho and steelhead to be released immediately unharmed.

Buoy 10 Sport Fishery

The Buoy 10 fishery was scheduled to be open for fall chinook and coho during August 1 through December 31 with a two fish daily bag limit in effect. Chinook catches began slowly, but like previous years catch rates improved steadily as the month of August progressed. Tule (LRH and BPH) fall chinook dominated the stock composition of the catch and emergency action was necessary to ensure that the Buoy 10 fishery impacts remained within preseason expectations. Effective August 24, the chinook bag limit was reduced so the daily salmon/steelhead catch limit was two fish, of which only one could be a chinook. The 2002 Buoy 10 fishery produced 84,400 angler trips with catches of 19,400 chinook and 6,200 adipose fin-clipped coho (Table 14). The coho catch was well below the preseason expectation of 20,200 while the chinook catch was similar to the preseason expectation of 21,200.

The large coho return in 2002 was not evident in the Buoy 10 catch. The total coho catch of 6,200 in 2002 was the lowest since 1996 and the fourth lowest on record. Coho catch rates of 0.07 coho/rod in 2002 were the lowest on record and especially disappointing considering the coho run size into the Columbia River and magnitude of the fishery. Buoy 10 chinook catches were large again in 2002; even with the chinook retention changes. The catch of 19,400 fall chinook in 2002 at Buoy 10 was the largest since 1987 and 1988 and the third largest on record.

Lower Columbia Mainstem Sport Fishery

The lower Columbia River sport fishery was also scheduled to be open during August 1 through December 31. Preseason expectations were for a catch of 14,870 chinook. As with Buoy 10, the lower Columbia River sport fishery was heavily monitored with frequent in-season catch updates. By early September it was apparent that the mainstem fishery would greatly exceed the preseason chinook catch estimate; however, no inseason management action was necessary. The 2002 mainstem sport fishery below Bonneville Dam produced 110,800 angler trips with a catch of 21,200 adult chinook, 3,000 adipose fin-clipped adult coho, and 3,500 adipose fin-clipped summer steelhead (Table 14). Effort, CPUE, and total catch for fall chinook were all record high in the mainstem sport fishery during 2002, and the total fall chinook catch of 21,200 more than doubled the previous record large catch of 9,355 in 2001.

2002 Fishery Impacts

As has been the case in recent years, 2002 was another season where fishery management under ESA restrictions required increased in-season monitoring and fishery modifications. Impacts to URB fall chinook were limited through the use of time restrictions in the treaty Indian fishery; time, area, and gear restrictions in the non-Indian commercial fishery; and time, area, and retention restrictions in the non-Indian sport fishery. Impacts to listed steelhead were limited through time and gear restrictions in the treaty Indian fishery; time, area, gear, and sales (no sales allowed) restrictions in the non-Indian commercial fishery; and time, area, and retention restrictions in the non-Indian sport fishery. Impacts to state-listed coho were limited through time, area, and gear restrictions in the non-Indian commercial fishery and retention restrictions in the non-Indian sport fishery. Fishery catches and impacts to listed species for 2002 fall fisheries are summarized in Table 29.

Harvest impacts on URB fall chinook were 28.02% as compared with the ESA guideline of 31.29% (Table 26). URB fall chinook impacts totaled 7.34% (8.25% guideline) in non-Indian fisheries and 20.68% (23.04% guideline) in treaty Indian fisheries. Fishery specific catch

estimates for SRW fall chinook are unavailable because the SRW run reconstruction analyses had not been completed at the time this report was written.

Impacts on Group B wild index steelhead were limited by the ESA to no more than 15.0% for treaty Indian fisheries and no more than 2.0% for non-Indian fisheries. Treaty fishery impacts occur as fish kept in commercial and C&S fisheries while non-Indian fishery impacts occur as catch and release mortalities in sport and commercial fisheries. Impact rates on wild group B index steelhead were estimated to be 5.9% for treaty Indian fisheries and 1.4% for non-Indian fisheries which resulted in a total of 7.3% for all fisheries combined.

Wild coho destined for Oregon shore tributaries of the Columbia River are listed as endangered under the Oregon State ESA and impacts on these fish were to be limited to no more than 15.0% for all fisheries, including ocean fisheries. Expected incidental mortality was 14.8% for all salmon fisheries, including an 11.1% impact in ocean fisheries and a 3.7% impact in the Columbia River fisheries. The adult abundance was about half of the preseason forecast, but observed incidental mortality was also less than expected. Actual combined ocean and freshwater fisheries impacts were estimated to be 13.3% as compared to the preseason modeled rate of 14.8% and the ESA guideline of 15.0%. The impact rate for Columbia River fisheries was 2.2%, which is well below the 3.7% impact limit.

2003 FALL SEASON FISHERY EXPECTATIONS

Non-Indian Fisheries

Specific recommendations for fall commercial seasons to harvest sturgeon, chinook, and coho will be presented at Compact hearings occurring throughout the fall management period. Goals for fall fisheries are:

- Limit impacts to SRW fall chinook as necessary while maximizing use of URB fall chinook impacts to prosecute non-Indian fisheries.
- Limit impacts on wild coho destined for tributaries of the lower Columbia River by adoption of time, area, and gear restrictions similar to those adopted during 1999-2002.
- Target surplus hatchery coho for maximum economic benefit to commercial fisheries.
- Maximize chinook fishing opportunities for as much of the lower river as possible.
- Attempt to harvest the balance of the commercial white sturgeon allocation by the end of October consistent with harvest protocol adopted at the February 6, 2003 Compact hearing.

Based on pre-season run size forecasts, a fishing schedule was developed for sport and commercial fisheries through the North of Falcon management process. As the fall management period continues run size updates will occur which could alter pre-season planned fisheries. Run sizes are typically not updated prior to mid-September; therefore, fisheries occurring prior to mid-September will be managed conservatively to allow for flexibility in shaping fishing opportunities during the mid-September through October time frame. Stock composition, and estimated URB impacts, for all fisheries will be modified in-season as catch estimates and CWT data become available. These data may alter URB impacts from pre-season expectations, which could subsequently result in modifications to other planned fisheries. The following section of this report generally describes fishery expectations for the 2003 fall management period. Fishery catch expectations and impacts to listed species for this fishing schedule are summarized in Table 28.

Early August Commercial Fisheries

Preseason fishing plans include target chinook fisheries in the lower river, below Longview Bridge, during the first two weeks of August. Depending on landings, and associated URB impacts, the fishery is expected to occur for up to four nights and will likely be complete prior to August 14. All fishing periods would include an 8-inch minimum mesh size restriction. A target sturgeon fishery, employing a 9-inch minimum mesh size restriction, may occur during the first week of August and daily or weekly landing restrictions are expected to be imposed to allow sturgeon retention to occur during all salmon fishing periods. Based on pre-season run size forecasts and North of Falcon negotiations the catch expectation for this time period is approximately 10,350 chinook. Catch of other salmon species, such as coho, are expected to be low due to timing of the fishery and the 8-inch minimum mesh size restriction. A total of 2,000 white sturgeon have been allocated for August fisheries, including late August fisheries.

Late August Commercial Fisheries

Pre-season fishing plans include target fall chinook fishing above the I-205 Bridge during the mid to late August time frame. Joint Staff recommendations will likely include two nighttime fishing periods per week with breaks in between fishing periods and a 9-inch minimum mesh size restriction in effect. As with the early August fisheries, a daily or weekly sturgeon landing restriction will likely be imposed to allow sturgeon retention to occur during all salmon fishing periods. Based on pre-season run sizes and North of Falcon negotiations the catch expectation for these fisheries is approximately 6,500 chinook. Catch of other species, such as coho, is typically very low in this fishery. A total of 2,000 white sturgeon have been allocated for August fisheries, including early August fisheries.

Late September Commercial Fisheries

Preseason plans are to initiate late fall fisheries as early as September 15 and to target coho or chinook depending on inseason run size updates and remaining impacts. The management goal will be to allow fisheries to occur in as much of the area below Bonneville Dam (Zones 1-5) as possible and target chinook for as many days as possible while maintaining adequate protection for listed species. In order to protect wild coho destined for Oregon tributaries of the lower Columbia River, primarily the Clackamas and Sandy rivers, area closures or mesh size restrictions will be required in the area between the Longview and I-205 bridges during the first week (September 15-19), between the mouth of the Kalama River and the I-205 Bridge during the second week (September 22-26), and between the upper end of Bachelor Island and the I-205 Bridge during the third week (September 29-October 3). Coho target fisheries are typically restricted to a 6-inch maximum mesh size restriction while late fall chinook fisheries are typically restricted to an 8-inch minimum mesh size restriction. In 2003 late September fisheries may have only the 9-³/₄ maximum mesh size restriction in effect to allow fishers to target on either coho or fall chinook. Daily or weekly sturgeon landing restrictions will likely be imposed to allow sturgeon retention to occur during all salmon fishing periods. Based on pre-season run sizes and North of Falcon negotiations the catch expectation for fisheries during the last half of September is approximately 11,000 adult chinook. Based on the improved run size forecast, coho catches are expected to total approximately 45,000 fish. A total of 3,600 white sturgeon have been allocated to fisheries occurring during the late fall (mid-September through October) time frame.

October Commercial Fisheries

Pre-season fishing plans include primarily coho fisheries. Coho fisheries with a 6-inch maximum mesh restriction will expand to include the entire lower river fishing area (Zones 1-5) in the second week of October (October 6-10) when most state-listed coho have moved into tributaries. Depending on URB impacts remaining the 6-inch maximum mesh size restriction may be lifted. Past sturgeon fishing periods have occurred during daylight hours on Mondays in all of Zones 1-5 and in some years have excluded nets with mesh sizes between 6-inch and 9-inch to allow participating fishers to target either coho or sturgeon. Sturgeon fisheries will depend on expected chinook fishing opportunity and number of sturgeon remaining on the commercial catch allocation. As with other fall fisheries a daily or weekly sturgeon limit may be imposed to allow sturgeon retention to occur during all salmon fisheries. Based on pre-season run sizes and North of Falcon negotiations the catch expectation for all October fisheries is 4,250 adult chinook. Coho catches are expected to total approximately 70,000 fish. Sturgeon catches during this time frame will depend on previous landings but a total of 3,600 white sturgeon have been allocated to fisheries occurring during the late fall (mid-September through October) time frame.

Youngs Bay Select Area Fisheries

Fisheries this fall in Youngs Bay are expected to follow a similar pattern as past years with daily fisheries occurring in August to harvest net-pen produced SAB fall chinook and early returning coho. After Labor Day (September 2) through the end of October it is expected that 7-day-per-week fishing would occur to harvest 100% of the net-pen produced coho. An 8-inch maximum mesh size restriction would be appropriate for fisheries prior to Labor Day with consideration given to a 6-inch maximum mesh size after Labor Day. The upper fishing boundary should be moved downstream from the confluence of the Klaskanine and Youngs rivers to Battle Creek Slough for the purpose of increasing SAB fall chinook escapement to Klaskanine Hatchery. Daily or weekly sturgeon limits may be imposed consistent with mainstem regulations and sturgeon retention will be eliminated completely if Select Area annual sturgeon catch reaches 400 white sturgeon prior to the end of October. Based on pre-season run size estimates approximately 67,500 coho are expected to be available for harvest in all Select Area fishing sites combined, with the majority destined for Youngs Bay. SAB chinook catches are expected to total 3,000 fish.

Other Select Area Fisheries

Other Select Area sites include Tongue Point, Blind Slough, Deep River, and Steamboat Slough fishing sites. Fisheries in these areas are target coho fisheries that are expected to open the week following Labor Day. Recent fisheries have included 1) four to five nightly fishing periods extending through the end of October, 2) nightly fishing periods expanding from 12 hours in September and early October to 14 hours for the remainder of October, and 3) 6-inch maximum mesh size restriction beginning in 2001. Past Big Creek fisheries have targeted surplus fall chinook destined for Big Creek Hatchery which is expected to occur in 2003. For 2003 the Big Creek fishery will likely focus on surplus fall chinook rather than coho. Daily or weekly sturgeon limits may be imposed consistent with mainstem regulations and sturgeon retention will be eliminated completely if Select Area annual sturgeon catch reaches 400 white sturgeon prior to the end of October. Based on pre-season run size forecasts it is estimated that approximately 67,500 coho will be available for harvest in all Select Area fishing sites combined and up to 12,000 chinook are projected to be available for harvest in the Big Creek fishery.

Buoy 10 Sport Fisheries

The Buoy 10 sport fishery is currently scheduled to open August 1 through December 31. The fishery will open with a two salmon, of which only one can be a chinook, daily catch limit and will expand to a three salmon, only one of which can be a chinook, daily catch limit effective August 16. Chinook retention will be prohibited if impacts to URB fall chinook exceed preseason expectations but based on current run size forecasts chinook retention is expected to be allowed through Labor Day. Coho retention will be restricted to adipose fin-clipped fish only but it is expected that adipose fin-clipped coho retention will likely be allowed throughout the duration of this fishery (August 1 through December 31). Based on pre-season run size forecasts and North of Falcon negotiations the chinook catch expectation for this fishery is 17,900 chinook. Coho catch is expected to increase over 2002 with approximately 36,700 adipose fin-clipped fish retained in 2003.

Mainstem Sport Fisheries

The mainstem sport fishery upstream of the Tongue Point/Rocky Point line is scheduled to be open August 1 through December 31 with a two salmon daily catch limit in effect. Coho retention will be restricted to adipose fin-clipped coho only downstream of Bonneville Dam. Based on preseason run sizes and catch estimates it is expected that chinook retention will be allowed through the end of September but could be prohibited sometime in October. Based on pre-season run size forecasts and North of Falcon negotiations, the chinook catch expectation for this fishery is 13,400 chinook. Coho catch is typically low in this fishery and will probably not exceed 3,000 adipose fin-clipped fish retained in 2003.

Treaty Indian Commercial Fisheries

In recent years treaty Indian fisheries have typically occurred from late August through late September. Fishery restrictions may include mesh size restrictions to better target fall chinook or area restrictions if necessary to reduce impacts on specific stocks. Sturgeon sales are generally not allowed during fall fisheries because catch guidelines have been achieved in one or more pool. Fall fisheries typically consist of three to five day weekly fishery periods that often occur later in the week to support sale of fish to the general public. The Columbia River treaty tribes may propose initial commercial fishing periods for the 2003 fall season at the August 22 Compact hearing.

Oregon Dept of Fish and Wildlife
Washington Department of Fish and Wildlife
July 16, 2002

Table 1. Summary of 2002 Actual and Current 2003 Forecasts of Adult Salmon and Steelhead Returns to the Columbia River.

Species, stock	2002 Return ¹	2003 Forecast ¹	Comments
Fall chinook	733,100	595,200	Fourth largest since 1948
Upriver bright (URB)	276,900	258,400	Second largest since 1989
Snake River wild (SRW)	NA	NA	
Mid-Columbia bright (MCB)	106,000	86,600	Third largest on record (since 1980)
Bonneville upriver bright (BUB)	57,900	43,100	Fourth largest on record (since 1980)
Pool upriver bright (PUB)	48,100	43,500	Second largest on record (since 1985)
Lower river bright (LRB)	2,400	1,800	Formerly a component of the BUB stock
Bonneville pool hatchery (BPH)	160,800	101,900	Fourth largest since 1976
Lower river hatchery (LRH)	156,400	116,900	Second largest since 1989
Lower river wild (LRW)	24,900	23,400	Second largest since 1989
Select area bright (SAB)	5,700	6,200	Based on recent 5-year average
Upriver summer steelhead	478,000	360,900	Fourth largest on record (1938)
Skamania index (May 1 - June 30)	25,000	16,600	12,100 hatchery and 4,500 wild
A-run index (length <78cm)	323,100	279,600	209,000 hatchery and 70,600 wild
B-run index (length ≥78cm)	129,900	64,700	53,200 hatchery and 11,500 wild
Coho	510,700	429,000	Smallest since 1999
Early stock	278,100	271,500	Similar to 2002
Late stock	232,600	157,500	Smallest since 1999

^{1.} Columbia River mouth return, except summer steelhead is Bonneville Dam return.

Table 2. Stock Accountability of Adult Fall Chinook Returning to the Columbia River, 1980-2002.

Return Year	Total Return	URB	BPH	MCB ¹	LRH	LRW	SAB
1980	319,300	76,800	97,800	300	105,600	38,800	
1981	278,900	66,600	86,300	4,400	94,900	25,000	
1982	363,100	79,000	120,700	8,800	139,500	13,000	
1983	237,600	86,100	28,900	14,400	88,100	16,800	
1984	309,400	131,400	47,500	11,800	102,400	13,300	
1985	361,600	196,400	33,200	6,100	111,000	13,300	1,600
1986	494,800	281,600	16,600	17,400	154,800	24,500	2,000
1987	871,000	420,700	9,100	57,000	344,100	37,900	2,300
1988	784,700	339,900	12,000	78,000	309,900	41,700	3,200
1989	552,100	261,300	26,800	93,300	130,900	38,600	1,200
1990	313,000	153,600	18,900	59,100	60,000	20,300	1,100
1991	276,100	103,300	52,400	35,900	62,700	19,800	2,000
1992	219,000	81,000	29,500	31,100	62,600	12,500	2,300
1993	214,900	102,900	16,800	27,400	52,300	13,300	2,100
1994	254,000	132,800	18,500	33,700	53,600	12,200	3,200
1995	242,800	106,500	33,800	34,100	46,400	16,000	6,000
1996	330,800	143,200	33,100	59,700	75,500	14,600	4,700
1997	321,500	161,700	27,400	58,900	57,400	12,300	3,800
1998	255,400	142,300	20,200	36,800	45,300	7,300	3,500
1999	313,100	166,100	50,200	50,600	40,000	3,300	2,900
2000	253,300	155,700	20,500	36,700	27,000	10,200	3,400
2001	548,900	232,600	125,000	76,400	94,300	15,700	4,900
2002	733,100	276,900	160,800	108,400	156,400	24,900	5,700

^{1.} Includes lower river brights (LRB).

Table 3. Predicted and Actual Returns of Columbia River Adult Fall Chinook, 1996-2002, and 2003 Forecasts (Thousands).

Stock	Year	Pre-season Forecast	Actual Return	Percent of Forecast
Lower River Hatchery	1996	48.4	75.5	156
	1997	68.7	57.4	84
	1998	22.5	45.3	201
	1999	38.2	40.0	105
	2000	26.4	27.0	102
	2001	30.5	94.3	309
	2002	133.0	156.4	117
	2003	116.9		
Lower River Wild	1996	8.1	14.6	180
	1997	7.2	12.3	171
	1998	7.0	7.3	104
	1999	2.5	3.3	132
	2000	2.7	10.2	378
	2001	18.5	15.7	85
	2002	18.3	24.9	136
	2003	23.4		
Bonneville Pool Hatchery	1996	35.4	33.1	94
	1997	25.7	27.4	107
	1998	14.2	20.2	142
	1999	61.0	50.2	82
	2000	26.9	20.5	76
	2001	61.9	125.0	202
	2002	136.0	160.8	118
	2003	101.9		
Upriver Bright	1996	94.2	143.2	152
	1997	158.0	161.7	102
	1998	141.8	142.3	100
	1999	102.1	166.1	163
	2000	208.2	155.7	75
	2001	132.7	232.6	175
	2002	273.8	276.9	101
	2003	258.4		
Mid-Columbia Bright ¹	1996	43.2	59.7	138
	1997	61.9	58.9	95
	1998	44.9	36.8	82
	1999	27.7	50.6	181
	2000	61.6	36.9	60
	2001	42.9	75.3	169
	2002	91.8	106.0	115
	2003	86.6		
Columbia River Total ²	1996	229.3	326.1	142
	1997	321.5	317.7	99
	1998	230.4	251.9	109
	1999	231.5	310.2	134
	2000	325.8	250.3	77
	2001	286.5	542.9	189
	2002	652.9	725.0	111
	2003	587.2		

^{1.} Does not include Lower River Brights (LRB).

^{2.} Does not include Lower River Bright (LRB) or Select Area Bright (SAB) stocks.

Table 4. Estimated Columbia River Returns and Lower Granite Dam Escapement of Snake River Wild Fall Chinook Adults, 1986-2000.¹

Year	Columbia River Return	Mainstem Harvest	Harvest Rate %	Passage Loss	BON-LGR Conversion Rate %	Lower Granite Escapement
1986	3,440	1,953	56.8	952	32.4	449
1987	2,295	1,309	57.1	554	33.7	253
1988	4,811	3,065	63.7	973	29.3	368
1989	2,527	1,444	57.1	569	36.5	295
1990	665	353	53.1	162	36.4	78
1991	2,261	908	40.2	1,035	23.5	318
1992	1,555	409	26.3	597	47.9	549
1993	1,620	450	27.8	428	63.4	742
1994	1,055	192	18.2	457	47.0	406
1995	1,223	232	19.0	641	35.3	350
1996	1,957	516	26.4	802	44.3	639
1997	2,048	659	32.2	592	57.4	797
1998	864	230	26.6	328	48.3	306
1999	2,739	831	30.34	1,003	47.5	905
2000	1,977	565	28.58	555	60.7	857

¹. Estimates for 2001, 2002 and projections for 2003 are not available because run reconstruction analyses were not completed at the time this report was written.

Table 5. Group A Index and Group B Index Summer Steelhead Returns to Bonneville Dam During 1984-2002 and 2003 Projections.

Year	Group A Index (<78 cm)					Group B Index (≥78 cm)				
	Number Wild	%	Number Hatchery	%	Total	Number Wild	%	Number Hatchery	%	Total
1984	52,500	27	143,200	73	195,700	13,800	14	84,200	86	98,000
1985	51,900	18	229,600	82	281,500	13,000	32	27,900	68	40,900
1986	56,600	20	230,900	80	287,500	10,000	16	54,000	84	64,000
1987	106,700	45	131,600	55	238,300	14,000	31	31,000	69	45,000
1988	64,300	37	108,800	63	173,100	17,700	22	63,900	78	81,600
1989	57,500	30	135,600	70	193,100	12,400	16	65,200	84	77,600
1990	27,100	23	88,500	77	115,600	8,800	19	38,400	81	47,200
1991	60,300	26	173,800	74	234,100	6,200	22	22,100	78	28,300
1992	44,300	18	197,200	82	241,500	12,700	22	44,800	78	57,500
1993	28,700	21	108,000	79	136,700	4,400	12	31,800	88	36,200
1994	21,200	18	99,800	82	121,000	5,200	19	22,300	81	27,500
1995	26,000	14	154,000	86	180,000	1,900	14	11,300	86	13,200
1996	25,700	15	148,700	85	174,400	3,900	21	14,900	79	18,800
1997	30,900	15	177,300	85	208,200	3,900	11	32,800	89	36,700
1998	34,800	26	99,900	74	134,700	3,400	9	36,900	91	40,300
1999	56,600	32	119,900	68	176,500	3,700	17	18,400	83	22,100
2000	63,600	29	153,100	71	216,700	8,400	21	32,500	79	40,900
2001	137,200	27	377,900	73	515,100	12,000	14	74,300	86	86,400
2002 ¹	87,300	27	235,800	73	323,100	32,300	25	97,600	75	129,900
2003²	70,600	25	209,000	75	279,600	11,500	18	53,200	82	64,700

¹. Preliminary
². Projected

Table 6. Minimum Numbers (Thousands) of Coho Adults Entering the Columbia River, 1970-2002.

Year	Lower Columbia River							Minimum Run
	Comm. Catch	Sport Catch			Hatchery	Dam	Bonneville	
	Zones 1-5 ¹	Estuary ²	L.Col.R. ³	Tributary	Returns	Counts ⁴	Dam Count	
1970	520.9	--	2.2	21.8	275.4	20.1	54.9	895.3
1971	264.3	--	1.4	16.0	187.7	21.3	53.8	544.5
1972	131.3	--	0.8	9.2	91.3	11.0	34.2	277.8
1973	183.7	--	0.3	7.4	68.2	5.8	25.8	291.2
1974	261.0	--	0.5	12.6	152.8	2.4	31.6	460.9
1975	156.6	--	0.6	10.0	85.4	7.1	32.8	292.5
1976	168.4	--	0.3	10.8	117.3	3.5	36.7	337.0
1977	39.0	--	0.5	5.7	37.1	2.2	9.3	93.8
1978	132.7	--	1.1	8.7	131.8	2.9	30.3	307.5
1979	127.6	--	0.2	12.1	102.6	4.4	29.6	276.5
1980	150.1	--	0.1	11.1	122.2	5.1	13.0	301.6
1981	60.0	--	0.1	7.6	77.9	2.8	21.9	170.3
1982	201.7	18.8	0.1	17.6	154.1	5.0	55.8	453.1
1983	7.1	3.6	0.2	5.1	73.6	2.5	8.4	100.5
1984	201.5	74.3	0.7	14.9	101.7	4.2	16.8	414.2
1985	190.0	25.4	1.1	9.4	94.2	7.5	38.6	366.2
1986	981.0	120.5	4.0	20.7	284.1	8.9	108.6	1,527.8
1987	165.3	47.2	0.9	6.1	66.1	4.2	17.9	307.6
1988	361.5	143.4	0.5	11.8	113.6	6.9	27.1	664.8
1989	387.3	81.9	0.2	15.1	183.3	6.4	27.4	701.6
1990	66.2	18.5	0.3	9.7	87.8	2.0	11.6	196.1
1991	407.5	208.7	1.1	29.3	223.3	5.5	58.9	934.3
1992	54.1	43.1	0.6	8.4	85.1	5.2	14.4	210.9
1993	35.6	20.9	0.6	6.3	39.1	0.8	10.6	113.9
1994	60.7	1.8	0.9	3.4	77.7	4.1	20.3	168.9
1995	21.4	5.0	0.2	2.6	31.5	2.9	10.4	74.0
1996	26.2	4.5	0.8	3.8	62.2	0.6	15.7	113.7
1997	20.5	20.4	0.8	8.5	69.7	2.8	24.1	146.8
1998	23.0	3.2	3.7	3.0	84.6	1.0	46.3	164.8
1999	79.0	9.0	1.3	16.8	123.9	1.0	40.7	271.7
2000	171.0	21.5	1.6	35.7	232.0	5.6	85.7	553.1
2001	253.1	132.0	3.1	73.6	378.5	8.2	259.5	1,108.0
2002	162.4	6.2	3.0	32.5	215.2	3.6	87.8	510.7

^{1.} Includes Youngs Bay, Big Creek (1970-present), other Select Area fisheries, and 1980-82 Washington terminal landings. Includes jacks, except beginning in 1987 jacks landed in Youngs Bay and other terminal fisheries are not included in this total.

^{2.} Catch from estuary recreational (Buoy 10) fishery. Catch from the estuary fishery prior to 1982 is included in ocean catch totals. Some non-Columbia River fish are caught in the estuary fishery and are included here.

^{3.} Catch from above Astoria-Megler Bridge through 1999 and catch from above Tongue Point/Rocky Point thereafter.

^{4.} Willamette Falls on the Willamette River, North Fork Dam on the Clackamas River, and Marmot Dam on the Sandy River.

Table 7. Minimum Numbers (Thousands) of Early Stock Coho Adults Entering the Columbia River, 1970-2002.

Year	Lower Columbia River							Minimum Run
	Comm. Catch Zones 1-5 ¹	Sport Catch			Hatchery Returns	Dam Counts ⁴	Bonneville Dam Count	
		Estuary ²	L.Col.R. ³	Tributary				
1970	396.5	--	1.7	16.6	226.2	18.6	53.1	712.7
1971	166.2	--	1.1	12.4	158.6	18.7	46.4	403.4
1972	70.3	--	0.7	7.4	81.3	10.4	32.2	202.3
1973	144.3	--	0.2	4.8	49.8	5.4	24.8	229.3
1974	120.1	--	0.4	10.6	123.8	1.6	26.1	282.6
1975	89.1	--	0.4	7.0	69.0	6.4	30.2	202.1
1976	71.2	--	0.2	6.8	71.5	2.5	33.1	185.3
1977	17.2	--	0.4	4.0	23.5	1.4	7.7	54.2
1978	62.4	--	0.8	6.2	98.7	2.4	27.9	198.4
1979	69.2	--	0.2	8.8	78.6	3.1	26.3	186.2
1980	68.8	--	0.1	6.2	76.4	2.0	6.8	160.3
1981	22.0	--	0.2	4.3	50.4	2.4	21.0	100.3
1982	42.6	11.9	0.1	11.6	108.4	3.8	51.0	229.4
1983	4.7	2.3	0.1	2.4	28.3	1.0	4.6	43.4
1984	115.1	46.3	0.5	6.9	54.9	3.8	13.1	240.6
1985	105.8	16.5	0.8	6.3	57.3	6.5	35.2	228.4
1986	356.6	97.6	2.9	9.5	158.6	5.9	99.7	730.8
1987	100.5	28.4	0.7	4.2	32.6	3.4	16.4	186.2
1988	186.7	61.7	0.3	7.0	47.3	6.3	23.0	332.3
1989	78.2	54.7	0.2	7.0	98.0	5.0	19.6	262.7
1990	38.3	12.6	0.3	6.3	40.9	1.7	8.7	108.8
1991	203.2	142.9	0.8	15.1	108.9	4.3	43.2	518.4
1992	19.4	29.1	0.5	4.1	44.5	3.4	8.4	109.4
1993	20.9	16.5	0.5	2.9	22.9	0.7	8.0	72.4
1994	58.3	1.4	0.8	2.2	59.6	3.3	12.6	138.2
1995	21.2	4.9	0.2	1.2	20.4	2.3	7.0	57.2
1996	22.3	3.9	0.8	2.4	44.3	0.6	8.9	82.6
1997	18.1	19.3	0.8	4.8	39.1	2.8	18.1	103.0
1998	22.8	3.0	3.6	0.7	46.8	0.9	34.2	112.0
1999	46.2	6.9	0.9	11.0	59.5	1.0	32.9	158.4
2000	78.9	18.7	1.0	24.5	138.2	4.9	58.9	325.1
2001	102.2	114.9	2.6	38.8	200.5	6.2	225.4	690.6
2002	104.0	5.4	1.1	15.4	98.4	3.4	50.4	278.1

^{1.} Includes Youngs Bay, Big Creek (1970-present), other Select Area fisheries, and 1980-82 Washington terminal landings. Includes jacks, except beginning in 1987 jacks landed in Youngs Bay and other terminal fisheries are not included in this total.

^{2.} Catch from estuary recreational (Buoy 10) fishery. Catch from the estuary fishery prior to 1982 is included in ocean catch totals. Some non-Columbia River fish are caught in the estuary fishery and are included here.

^{3.} Catch from above Astoria-Megler Bridge through 1999 and catch from above Tongue Point/Rocky Point thereafter.

^{4.} Willamette Falls on the Willamette River, North Fork Dam on the Clackamas River, and Marmot Dam on the Sandy River

Table 8. Minimum Numbers (Thousands) of Late Stock Coho Adults Entering the Columbia River, 1970-2002.

Year	Lower Columbia River							Minimum Run
	Comm. Catch Zones 1-5 ¹	Sport Catch			Hatchery Returns	Dam Counts ⁴	Bonneville Dam Count	
		Estuary ²	L.Col.R. ³	Tributary				
1970	124.3	--	0.5	5.1	49.3	1.6	1.8	182.6
1971	98.1	--	0.3	3.7	29.0	2.6	7.4	141.1
1972	61.0	--	0.2	1.8	9.9	0.6	2.0	75.5
1973	39.4	--	0.1	2.6	18.4	0.4	1.1	62.0
1974	140.9	--	0.1	2.0	29.0	0.8	5.5	178.3
1975	67.6	--	0.2	2.9	16.4	0.7	2.6	90.4
1976	97.2	--	0.1	4.0	45.8	1.0	3.6	151.7
1977	21.8	--	0.1	1.7	13.6	0.9	1.6	39.7
1978	70.3	--	0.2	2.6	33.1	0.5	2.4	109.1
1979	58.4	--	0.0	3.4	23.9	1.3	3.3	90.3
1980	81.2	--	0.0	5.0	45.8	3.1	6.2	141.3
1981	37.9	--	0.0	3.3	27.5	0.4	1.0	70.1
1982	159.1	7.0	0.0	6.0	45.7	1.1	4.8	223.7
1983	2.4	1.3	<0.1	2.7	45.3	1.5	3.8	57.0
1984	86.4	28.1	0.2	8.0	46.8	0.4	3.6	173.5
1985	84.2	8.9	0.3	3.1	36.9	1.0	3.4	137.8
1986	624.4	22.8	1.1	11.3	125.5	2.9	8.9	796.9
1987	64.8	18.8	0.2	1.8	33.4	0.9	1.5	121.4
1988	174.9	81.7	0.2	4.8	66.3	0.6	4.1	332.6
1989	309.1	27.2	<0.1	8.1	85.3	1.4	7.8	438.9
1990	27.9	5.8	<0.1	3.5	46.9	0.3	2.9	87.4
1991	204.3	65.7	0.3	14.3	114.4	1.3	15.6	415.9
1992	34.7	14.0	<0.1	4.3	40.7	1.8	6.0	101.5
1993	14.8	4.4	0.1	3.4	16.1	0.1	2.6	41.5
1994	2.4	0.4	0.1	1.2	18.1	0.8	7.7	30.7
1995	0.2	0.2	<0.1	1.3	11.1	0.6	3.4	16.8
1996	3.8	0.6	<0.1	1.4	17.9	<0.1	6.8	30.5
1997	2.4	1.0	<0.1	3.7	30.7	<0.1	6.0	43.8
1998	0.2	0.2	0.2	2.3	37.8	0.1	12.1	52.9
1999	32.8	2.1	0.4	7.5	64.4	0.1	7.8	125.9
2000	92.1	2.8	0.6	10.4	93.8	0.6	26.8	227.1
2001	150.9	17.1	0.5	34.8	177.9	1.9	34.1	417.2
2002	58.4	0.8	1.9	17.1	116.8	0.2	37.4	232.6

- ^{1.} Includes Youngs Bay, Big Creek (1970-present), other Select Area fisheries, and 1980-82 Washington terminal landings. Includes jacks, except beginning in 1987 jacks landed in Youngs Bay and other terminal fisheries are not included in this total.
- ^{2.} Catch from estuary recreational (Buoy 10) fishery. Catch from the estuary fishery prior to 1982 is included in ocean catch totals. Some non-Columbia River fish are caught in the estuary fishery and are included here.
- ^{3.} Catch from above Astoria-Megler Bridge.
- ^{4.} North Fork Dam on the Clackamas River.

Table 9. Escapement Index Values for Chum in Washington Lower Columbia River Tributaries and for Late Run Coho in Oregon Columbia River Tributaries Downstream of the Sandy River, 1950-2002.

Year	Chum (Washington Tributaries)			Coho (Oregon Tributaries)		
	Miles Surveyed	Fish Observed	Fish/Mile	Miles Surveyed ¹	Fish Observed	Fish/Mile
<i>50's Average</i>	2.2	903	450	9.4	263	28
<i>60's Average</i>	4.9	767	179	6.8	161	24
<i>70's Average</i>	6.0	450	77	9.3	61	7
1980	6.7	276	41	9.3	81	9
1981	4.0	56	14	9.3	16	2
1982	6.1	1,127	185	9.3	17	2
1983	5.8	317	55	9.3	11	1
1984	7.1	499	70	9.3	17	2
1985	7.1	500	70	7.8	3	<1
1986	7.4	1,138	154	9.3	51	5
1987	7.1	1,016	143	9.3	7	1
1988	7.1	1,917	270	9.3	5	1
1989	7.1	367	52	9.3	3	<1
<i>80's Average</i>	6.6	721	105	9.2	21	2
1990	7.1	832	117	9.4	4	<1
1991	7.1	673	95	9.4	3	<1
1992	7.1	3,273	461	9.4	4	<1
1993	7.1	1,411	199	9.3	2	<1
1994	7.1	509	72	9.3	3	<1
1995	7.2	922	128	9.3	2	<1
1996	7.2	1,545	215	9.3	0	0
1997	7.2	1,054	146	9.3	0	0
1998	7.2	1,666	231	9.3	4	<1
1999	7.2	2,096	291	9.3	4	<1
<i>90's Average</i>	7.1	1,321	185	9.3	2	<1
2000	6.1	2,425	398	9.3	82 ²	9
2001	5.8	4,551	785	9.3	13 ²	1
2002	6.3	8,662	1,375	9.3	84	9

^{1.} In 1975 the database was reorganized into 9.3 miles of ten standard index streams that best indicate trends in escapement since 1967. Prior to 1967 the same ten streams were used; however, survey miles and frequency varied. In 1968 two index streams were not surveyed and in 1985 observations in an index survey heavily influenced by hatchery adult introduction was not included.

^{2.} May include some adipose fin-clipped coho.

Table 10. Salmon, Steelhead, and Smelt of the Columbia River Basin Considered for Listing Under the Federal ESA. ¹			
Species - ESU	Designation	Listing Date	Effective Date
<u>Chinook</u>			
Snake River Fall	Threatened	April 22, 1992	May 22, 1992
Snake River Spring/Summer	Threatened	April 22, 1992	May 22, 1992
Upper Columbia Spring	Endangered	March 24, 1999	May 24, 1999
Upper Columbia Summer/Fall	Not warranted	--	--
Middle Columbia Spring	Not warranted	--	--
Lower Columbia River Spring/Fall	Threatened	March 24, 1999	May 24, 1999
Upper Willamette Spring	Threatened	March 24, 1999	May 24, 1999
Deschutes River Fall	Not warranted	--	--
<u>Steelhead</u>			
Snake River	Threatened	August 18, 1997	October 17, 1997
Upper Columbia River ²	Endangered	August 18, 1997	October 17, 1997
Lower Columbia River	Threatened	March 19, 1998	May 18, 1998
Middle Columbia River	Threatened	March 25, 1999	May 24, 1999
Southwest Washington	Not warranted	--	--
Upper Willamette	Threatened	March 25, 1999	May 24, 1999
<u>Sockeye</u> – Snake River	Endangered	November 20, 1991	December 20, 1991
<u>Chum</u> – Columbia River	Threatened	March 25, 1999	May 24, 1999
<u>Coho</u> – Columbia River ³	Under review	--	--
<u>Smelt</u> – Columbia River	Petition not accepted	--	--

^{1.} The ESU's in bold are present in the Columbia River basin during the time when fisheries described in this report occur and therefore may be impacted by these fisheries.

^{2.} Includes hatchery fish.

^{3.} In 1991, the NMFS decided not to list wild coho of the lower Columbia River (Columbia River and its tributaries below Bonneville Dam, exclusive of the Willamette River) because the remaining small remnant runs are predominately hatchery-maintained and are not a species as defined in the ESA. In 1995, the NMFS combined Columbia River coho with Willapa Bay and Grays Harbor coho into a single evolutionarily significant unit (ESU) and identified it as a candidate species, worthy of further study. In 2000, the NMFS began another status review of lower Columbia River coho. Lower Columbia River coho destined for Oregon tributaries were listed as an endangered species under Oregon state law in July 1999.

Table 11. Sturgeon Catch Guidelines in the Zone 6 Management Area, 1997-2003.					
Reservoir / Fishery	1997	1998-2000	2001	2002	2003
Bonneville	2,820	2,820	2,820	2,820	2,900
Sport	1,520	1,520	1,520	1,520	1,700
Treaty Commercial	1,300	1,300	1,300	1,300	1,200
The Dalles	600	1,800	1,800	1,800	1,300
Sport	200	600-800	700	700	400
Treaty Commercial	400	1,000-1,200	1,100	1,100	900
John Day	1,720	1,720	1,720	500	500
Sport	560	560	560	165	165
Treaty Commercial	1,160	1,160	1,160	335	335

Table 12. Fall Lower River and Zone 6 Mainstem Commercial Fishing Seasons, 2002.

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
AUG	4 7 pm ■ ■	5 7 am ■ ■	6 7 pm ■ ■	7 7 am ■ ■	8 7 pm ■ ■	9 7 am 7 pm ■ ■ ■ ■	10 7 am ■ ■
	11 7 pm ■ ■	12 7 am ■ ■	13	14	15	16	17
	18 8 pm ● ●	19 6 am ● ●	20 8 pm ● ●	21 6 am ● ●	22 8 pm ● ●	23 6 am ● ●	24
SEP	25 8 pm ● ●	26 6 am ● ●	27 8 pm ● ●	28 6 am ● ●	29	30	31 6 pm
	1	2	3	4 6 am	5	6	7 6 pm
	8	9	10	11 6 am	12	13	14 6 pm
OCT	15	16 7 am 7 pm ■ ■ ■ ■ 6 am	17	18	19 7 am ■ ■ ■ ■ ■ ■	20 7 am ■ ■ ■ ■ ■ ■ ■ ■	21 6 pm
	22	23	24 7 pm ■ ■	25 6 am ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	26 7 am ■ ■	27	28 6 pm
	29	30 7 pm ■ ■	1 7 pm ■ ■ ■ ■ ■ ■	2 7 pm ■ ■	3 7 pm ■ ■ ■ ■ ■ ■	4	5
NOV	6 7 pm ■ ■	7 7 pm ■ ■ ■ ■ ■ ■	8	9 7 pm ■ ■	10 7 pm ■ ■ ■ ■ ■ ■	11	12
	13	14 7 pm ■ ■	15 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	16 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	17 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	18 7 am ■ ■	19
	20	21 7 pm ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	22 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	23 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	24 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	25 7 am ■ ■	26
DEC	27	28 7 am ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	29 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	30 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	31 7 am ■ ■ ■ ■		

Lower River: ■ ■ ■ ■ Expanded Area 2-S ● ● ● ● Zone 6: ■■■■■■

Table 13. Fall Select Area Commercial Fishing Seasons, 2002.

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
AUGUST					1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
SEPTEMBER	25	26	27	28	29	30	31
	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	1	2	3	4	5
OCTOBER	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31	6pm	

Youngs Bay

 Other Select Areas: Fisheries open 7 pm - 7 am during September 3-27
 Fisheries open 6 pm - 8 am during September 30-October 31

Table 14. Salmon, Steelhead, and Sturgeon Catch in 2002 Fall Fisheries.¹

Fishery	Date	Chinook	Coho	Chum	Summer Steelhead	White Sturgeon	Green Sturgeon
Treaty Indian Fisheries							
Zone 6 Commercial	Aug. 28-31	22,711	66	0	844	0	--
Zone 6 Commercial	Sept. 4-7	32,613	29	0	1,266	0	--
Zone 6 Commercial	Sept. 11-14	40,666	566	0	2,444	0	--
Zone 6 Commercial	Sept. 16-20	24,665	479	0	3,679	0	--
Zone 6 Commercial	Sept. 27-29	9,540	459	0	4,248	0	--
Zone 6 Setline	Oct. 1-Dec. 15	--	--	--	--	209	--
Zone 6 C & S	Aug.-Dec.	427	50	0	1,280	--	--
Treaty Indian Total		130,622	1,649	0	13,761	209	--
Non-Indian Fisheries							
Zone 1-3 Salmon/Sturgeon	Aug. 4-9	5,499	5	0	--	1,343	0
Zone 1-3 Salmon	Aug. 9-10	1,547	1	0	--	0	0
Zone 2-3 Salmon	Aug. 11-12	890	3	0	--	0	0
Zone 4-5	Aug. 18-23	3,278	18	0	--	172	0
Zone 4-5	Aug. 25-28	8,290	34	0	--	210	0
Zones 1-3	Sept. 16-19	3,293	22,278	0	--	114	5
Zones 4-5	Sept. 19-20	1,659	257	0	--	203	0
Zones 1-3	Sept. 24-26	1,716	11,071	1	--	292	8
Zones 4-5	Sept. 24-27	2,743	359	0	--	72	0
Zones 1-3	Sept. 30-Oct. 3	1,035	23,873	0	--	503	24
Zones 4-5	Sep. 30-Oct. 3	1,428	209	0	--	117	0
Zones 1-3	Oct. 6-10	685	15,400	3	--	427	39
Zones 4-5	Oct. 6-10	955	122	0	--	123	0
Zones 1-5	Oct. 14-18	1,143	11,272	3	--	1,203	49
Zones 1-5	Oct. 21-25	620	9,119	6	--	1,134	31
Zones 2-5	Oct. 28-31	168	854	0	--	0	0
<i>Subtotal</i>		<i>34,949</i>	<i>94,875</i>	<i>13</i>	<i>--</i>	<i>5,913</i>	<i>156</i>
Youngs Bay	Aug. 7 – Oct. 31	3,774	51,859	0	--	96	0
Tongue Pt./South Ch.	Sept. 3 – Oct. 31	1,708	15,560	0	--	202	0
Blind & Knappa Sl.	Aug. 26 – Oct. 31	2,760	1,449	0	--	33	0
Deep River	Sept. 4 – Oct. 31	145	300	1	--	3	0
Steamboat Slough	Sept. 4 – Oct. 31	171	98	0	--	0	0
<i>Subtotal</i>		<i>8,558</i>	<i>69,266</i>	<i>1</i>	<i>--</i>	<i>334</i>	<i>0</i>
Buoy 10 Sport ²	Aug. 1-Dec. 31	19,400	6,200	--	--	--	--
Lower River Sport	Aug. 1-Dec. 31	21,200	3,000	--	3,500	2,100	0
Bonn. Dam to Priest Rapids Dam Sport	Aug. 1-Dec. 31	6,910	1,260	0	NA	--	--
<i>Subtotal</i>		<i>47,510</i>	<i>10,460</i>	<i>0</i>	<i>3,500</i>	<i>2,100</i>	<i>0</i>
Non-Indian Total		91,017	174,601	14	3,500	8,347	156
Grand Total		221,639	176,250	14	17,261	8,556	156

^{1.} Non-Indian commercial landings are based on final post-season Report B landings. Please see Table 15 for details concerning specific commercial season, area, and gear restriction.

^{2.} Buoy 10 open August 1-December 31, 2002 with a two chinook daily catch limit in effect prior to August 24 and a one chinook daily catch limit in effect thereafter.

Table 15. Non-Indian Fall Commercial Fishing Seasons, 2002

Main-Stem Salmon and Sturgeon Seasons				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
12 hrs	Early Fall	Aug 4, 7 PM - Aug 5, 7 AM	8" min. and 9 3/4" max. mesh size restrictions.	Zones 1-3 (Mouth upstream to Longview Bridge). Grays R. and Elokom-in-A sanctuaries in effect. Salmon and White Sturgeon. A maximum of five white sturgeon may be possessed or sold by each participating vessel during each of the open fishing periods. The possession or sale of green sturgeon is prohibited.
12 hrs		Aug 6, 7 PM - Aug 7, 7 AM	Same.	Same.
12 hrs		Aug 8, 7 PM - Aug 9, 7 AM	Same.	Same.
12 hrs		Aug 9, 7 PM - Aug 10, 7 AM	Same.	Same areas. Salmon only. No sturgeon sales allowed.
12 hrs		Aug 11, 7 PM - Aug 12, 7 AM	Same.	Zones 2-3 (Tongue Point/Grays Point line upstream to Lewis River mouth/Warrior Point line). Grays R., Elokom-in-A, Cowlitz, Kalama, and Lewis-A sanctuaries in effect. Salmon only. No sturgeon sales allowed.
10 hrs		Aug 18, 8 PM - Aug 19, 6 AM	9" min. and 9 3/4" max. mesh size restrictions.	Area 2S expanded, Zones 4-5 (I-205 Bridge upstream to Beacon Rock). Sandy and Washougal River sanctuaries in effect. Salmon and white sturgeon. A maximum of five white sturgeon may be possessed or sold by each participating vessel during each of the open fishing periods. The possession or sale of green sturgeon is prohibited.
10 hrs		Aug 20, 8 PM - Aug 21, 6 AM	Same.	Same.
10 hrs		Aug 22, 8 PM - Aug 23, 6 AM	Same.	Same.
10 hrs		Aug 25, 8 PM - Aug 26, 6 AM	Same.	Same.
10 hrs		Aug 27, 8 PM - Aug 28, 6 AM	Same.	Same.
12 hrs	Late Fall	Sep 16, 7 AM - 7 PM	Unslacked floater gillnet with 6" max. mesh size restriction.	Zones 1-3 (Mouth upstream to the Longview Bridge). Grays R., Elokom-in-A, and Abernathy Creek sanctuaries in effect. Salmon and sturgeon.
12 hrs		Sep 19, 7 AM - 7 PM	Same.	Same.
12 hrs		Sep 19, 7 PM - Sep 20, 7 AM	8" min. mesh size restriction	Zones 4-5 (Warrior Point on the Oregon Shore to the Lewis River mouth on the Washington shore upstream to Beacon Rock). Sandy and Washougal River sanctuaries in effect. Salmon and sturgeon.
1 1/2		Sep 24, 7 PM - Sep 26, 7 AM	9 3/4" max. mesh size restriction downstream of the Longview Bridge and 8" - 9 3/4" mesh size restriction upstream of the lower Zone 4 boundary from Warrior Rock on the Oregon shore to the mouth of the Lewis River on the Washington shore.	Zones 1-5 (Mouth upstream to Beacon Rock; except closed from the Longview Bridge upstream to the lower Zone 4 boundary from Warrior Point on the Oregon Shore to the Lewis River mouth on the Washington shore). Grays R., Elokom-in-A, Abernathy Creek, Sandy R., and Washougal R. sanctuaries in effect. Salmon and sturgeon. A maximum of five white sturgeon may be possessed or sold by each participating vessel during the open fishing period.

Table 15. continued

Main-Stem Salmon and Sturgeon Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
12hrs	Late Fall (cont.)	Sep 26, 7 PM - Sep 27, 7 AM	8" min. mesh size restriction	Zones 4-5 (Warrior Point on the Oregon Shore to the Lewis River mouth on the Washington shore upstream to Beacon Rock). Sandy and Washougal River sanctuaries in effect. Salmon only. No sturgeon sales allowed.
1		Sep 30, 7 PM - Oct 1, 7 PM	No minimum and 9 3/4" max. mesh size restriction downstream of the lower Zone 4 boundary from Warrior Point on the Oregon shore to the mouth of the Lewis River on the Washington shore and 8" min. and 9 3/4" max. mesh size restrictions upstream of the lower Zone 4 boundary.	Zones 1-5 (Mouth upstream to Beacon Rock). Grays R., Elokomina-A, Abernathy Creek, Cowlitz R., Kalama-A, Lewis-A, Sandy R., and Washougal R. sanctuaries in effect. Salmon and sturgeon. A maximum of five white sturgeon may be possessed or sold by each participating vessel during each open fishing period.
1		Oct 2, 7 PM - Oct 3, 7 PM	Same.	Same.
1		Oct 6, 7 PM - Oct 7, 7 PM	Same.	Same.
1		Oct 9, 7 PM - Oct 10, 7 PM	Same.	Same.
3 1/2		Oct 14, 7 PM - Oct 18, 7 AM	No minimum and 9 3/4" max. mesh size restriction.	Same areas and sanctuaries. Salmon and Sturgeon. Each participating vessel during any fishing period may possess or sell a daily maximum of five white sturgeon, with a weekly (Monday-Friday) maximum of 15 white sturgeon sold.
3 1/2		Oct 21, 7 PM - Oct 25, 7 AM	Same.	Same.
3		Oct 28, 7 AM - Oct 31, 7 AM	Same.	Zones 2-5 (From a line between Harrington Point on the Washington shore to Settler Point on the Oregon shore upstream to a line extending from the Green Navigation Marker 85 near River Mile 140 at a right angle to the thread of the Columbia River to the Oregon shore). Grays R., Elokomina-A, Abernathy Creek, Cowlitz R., Kalama-A, Lewis-A, Sandy R., and Washougal R. sanctuaries in effect. Salmon only. No sturgeon sales allowed.

Select Area Seasons				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
1 1/4	Youngs Bay - Fall	Aug 7, noon - Aug 8, 6 PM	8" max. mesh size restriction. Nets may not exceed 250 fathoms in length. Leadline not to exceed 2 lbs per fathom.	Youngs Bay select fishing area (Oregon only). Upper deadline at Battle Creek Slough. Permanent transportation rules are in effect. Salmon and white sturgeon. The possession or sale of green sturgeon is prohibited.
1 1/4		Aug 14, noon - Aug 15, 6 PM	Same.	Same.
1 1/4		Aug 21, noon - Aug 22, 6 PM	Same.	Same.

Table 15. continued

Select Area Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
1 1/4	Youngs Bay - Fall (cont.)	Aug 28, noon - Aug 29, 6 PM	8" max. mesh size restriction. Nets may not exceed 250 fathoms in length. Leadline not to exceed 2 lbs per fathom.	Youngs Bay select fishing area (Oregon only). Upper deadline at Battle Creek Slough. Permanent transportation rules are in effect. Salmon and white sturgeon. The possession or sale of green sturgeon is prohibited.
58 1/4		Sep 3, noon - Oct 31, 6 PM	6" max. mesh size restriction. Nets may not exceed 250 fathoms in length. Leadline not to exceed 2 lbs per fathom.	Same areas. Both salmon and sturgeon may be sold.
12hrs	Tongue Point - Fall	Sep 3, 7 PM - Sep 4, 7 AM	6" max. mesh size restriction in effect for Tongue Point Basin. Nets may not exceed 250 fathoms in length and leadline not to exceed 2 lbs per fathom.	Tongue Point Basin select fishing area (concurrent waters). Fishers in Tongue Point area may have stored onboard, gillnets with a leadline in excess of 2 lbs per fathom. Permanent transportation rules are in effect. Salmon and sturgeon.
12 hrs		Sep 4, 7 PM - Sep 5, 7 AM	Same.	Same.
12 hrs		Sep 5, 7 PM - Sep 6, 7 AM	Same.	Same.
12 hrs		Sep 9, 7 PM - Sep 10, 7 AM	Same.	Same.
12 hrs		Sep 10, 7 PM - Sep 11, 7 AM	Same.	Same.
12 hrs		Sep 11, 7 PM - Sep 12, 7 AM	Same.	Same.
12 hrs		Sep 12, 7 PM - Sep 13, 7 AM	Same.	Same.
12 hrs	Tongue Point / South Channel - Fall	Sep 16, 7 PM - Sep 17, 7 AM	Tongue Point: 6" max. mesh size restriction. Nets may not exceed 250 fathoms in length and leadline may not exceed 2 lbs per fathom. South Channel: 6" max. mesh size restriction. Nets may not exceed 100 fathoms in length and there is no weight restriction on the leadline.	Tongue Point Basin/South Channel select fishing areas (concurrent waters). Fishers in Tongue Point area may have stored onboard, gillnets with a leadline in excess of 2 lbs per fathom. Permanent transportation rules are in effect. Salmon and sturgeon.
12 hrs		Sep 17, 7 PM - Sep 18, 7 AM	Same.	Same.
12 hrs		Sep 18, 7 PM - Sep 19, 7 AM	Same.	Same.
12 hrs		Sep 19, 7 PM - Sep 20, 7 AM	Same.	Same.
12 hrs		Sep 23, 7 PM - Sep 24, 7 AM	Same.	Same.
12 hrs		Sep 24, 7 PM - Sep 25, 7 AM	Same.	Same.
12 hrs		Sep 25, 7 PM - Sep 26, 7 AM	Same.	Same.
12 hrs		Sep 26, 7 PM - Sep 27, 7 AM	Same.	Same.
14 hrs		Sep 30, 6 PM - Oct 1, 8 AM	Same.	Same.

Table 15. continued

Select Area Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
14 hrs	Tongue Point / South Channel - Fall (cont.)	Oct 1, 6 PM - Oct 2, 8 AM	Tongue Point: 6" max. mesh size restriction. Nets may not exceed 250 fathoms in length and leadline may not exceed 2 lbs per fathom. South Channel: 6" max. mesh size restriction. Nets may not exceed 100 fathoms in length and there is no weight restriction on the leadline.	Tongue Point Basin/South Channel select fishing areas (concurrent waters). Fishers in Tongue Point area may have stored onboard, gillnets with a leadline in excess of 2 lbs per fathom. Permanent transportation rules are in effect. Salmon and sturgeon.
14 hrs		Oct 2, 6 PM - Oct 3, 8 AM	Same.	Same.
14 hrs		Oct 3, 6 PM - Oct 4, 8 AM	Same.	Same.
14 hrs		Oct 7, 6 PM - Oct 8, 8 AM	Same.	Same.
14 hrs		Oct 8, 6 PM - Oct 9, 8 AM	Same.	Same.
14 hrs		Oct 9, 6 PM - Oct 10, 8 AM	Same.	Same.
14 hrs		Oct 10, 6 PM - Oct 11, 8 AM	Same.	Same.
14 hrs		Oct 14, 6 PM - Oct 15, 8 AM	Same.	Same.
14 hrs		Oct 15, 6 PM - Oct 16, 8 AM	Same.	Same.
14 hrs		Oct 16, 6 PM - Oct 17, 8 AM	Same.	Same.
14 hrs		Oct 17, 6 PM - Oct 18, 8 AM	Same.	Same.
14 hrs		Oct 21, 6 PM - Oct 22, 8 AM	Same.	Same.
14 hrs		Oct 22, 6 PM - Oct 23, 8 AM	Same.	Same.
14 hrs		Oct 23, 6 PM - Oct 24, 8 AM	Same.	Same.
14 hrs		Oct 24, 6 PM - Oct 25, 8 AM	Same.	Same.
14 hrs		Oct 28, 6 PM - Oct 29, 8 AM	Same.	Same.
14 hrs		Oct 29, 6 PM - Oct 30, 8 AM	Same.	Same.
14 hrs	Oct 30, 6 PM - Oct 31, 8 AM	Same.	Same.	
3	Blind Slough / Knappa Slough - Fall	Aug 26, 7 PM - Aug 29, 7 PM	9 3/4" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.	Blind Slough/Knappa Slough select fishing area (concurrent waters up to railroad bridge, Oregon only above). Permanent transportation rules are in effect. Salmon and sturgeon.
12 hrs		Sep 3, 7 PM - Sep 4, 7 AM	Same.	Same.
12 hrs		Sep 4, 7 PM - Sep 5, 7 AM	Same.	Same.

Table 15. continued

Select Area Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
12 hrs	Blind Slough / Knappa Slough - Fall (cont.)	Sep 5, 7 PM - Sep 6, 7 AM	9 3/4" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.	Blind Slough/Knappa Slough select fishing area (concurrent waters up to railroad bridge, Oregon only above). Permanent transportation rules are in effect. Salmon and sturgeon.
12 hrs		Sep 9, 7 PM - Sep 10, 7 AM	Same.	Same.
12 hrs		Sep 10, 7 PM - Sep 11, 7 AM	Same.	Same.
12 hrs		Sep 11, 7 PM - Sep 12, 7 AM	Same.	Same.
12 hrs		Sep 12, 7 PM - Sep 13, 7 AM	Same.	Same.
12 hrs		Sep 16, 7 PM - Sep 17, 7 AM	6" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.	Same.
12 hrs		Sep 17, 7 PM - Sep 18, 7 AM	Same.	Same.
12 hrs		Sep 18, 7 PM - Sep 19, 7 AM	Same.	Same.
12 hrs		Sep 19, 7 PM - Sep 20, 7 AM	Same.	Same.
12 hrs		Sep 23, 7 PM - Sep 24, 7 AM	Same.	Same.
12 hrs		Sep 24, 7 PM - Sep 25, 7 AM	Same.	Same.
12 hrs		Sep 25, 7 PM - Sep 26, 7 AM	Same.	Same.
12 hrs		Sep 26, 7 PM - Sep 27, 7 AM	Same.	Same.
14 hrs		Sep 30, 6 PM - Oct 1, 8 AM	Same.	Same.
14 hrs		Oct 1, 6 PM - Oct 2, 8 AM	Same.	Same.
14 hrs		Oct 2, 6 PM - Oct 3, 8 AM	Same.	Same.
14 hrs		Oct 3, 6 PM - Oct 4, 8 AM	Same.	Same.
14 hrs		Oct 7, 6 PM - Oct 8, 8 AM	Same.	Same.
14 hrs		Oct 8, 6 PM - Oct 9, 8 AM	Same.	Same.
14 hrs		Oct 9, 6 PM - Oct 10, 8 AM	Same.	Same.

Table 15. continued

Select Area Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
14 hrs	Blind Slough / Knappa Slough - Fall (cont.)	Oct 10, 6 PM - Oct 11, 8 AM	6" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.	Blind Slough/Knappa Slough select fishing area (concurrent waters up to railroad bridge, Oregon only above). Permanent transportation rules are in effect. Salmon and sturgeon.
14 hrs		Oct 14, 6 PM - Oct 15, 8 AM	Same.	Same.
14 hrs		Oct 15, 6 PM - Oct 16, 8 AM	Same.	Same.
14 hrs		Oct 16, 6 PM - Oct 17, 8 AM	Same.	Same.
14 hrs		Oct 17, 6 PM - Oct 18, 8 AM	Same.	Same.
14 hrs		Oct 21, 6 PM - Oct 22, 8 AM	Same.	Same.
14 hrs		Oct 22, 6 PM - Oct 23, 8 AM	Same.	Same.
14 hrs		Oct 23, 6 PM - Oct 24, 8 AM	Same.	Same.
14 hrs		Oct 24, 6 PM - Oct 25, 8 AM	Same.	Same.
14 hrs		Oct 28, 6 PM - Oct 29, 8 AM	Same.	Same.
14 hrs		Oct 29, 6 PM - Oct 30, 8 AM	Same.	Same.
14 hrs		Oct 30, 6 PM - Oct 31, 8 AM	Same.	Same.
12 hrs		Deep River - Fall	Sep 3, 7 PM - Sep 4, 7 AM	6" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.
12 hrs	Sep 4, 7 PM - Sep 5, 7 AM		Same.	Same.
12 hrs	Sep 5, 7 PM - Sep 6, 7 AM		Same.	Same.
12 hrs	Sep 9, 7 PM - Sep 10, 7 AM		Same.	Same.
12 hrs	Sep 10, 7 PM - Sep 11, 7 AM		Same.	Same.
12 hrs	Sep 11, 7 PM - Sep 12, 7 AM		Same.	Same.
12 hrs	Sep 12, 7 PM - Sep 13, 7 AM		Same.	Same.
12 hrs	Sep 16, 7 PM - Sep 17, 7 AM		Same.	Same.
12 hrs	Sep 17, 7 PM - Sep 18, 7 AM		Same.	Same.
12 hrs	Sep 18, 7 PM - Sep 19, 7 AM		Same.	Same.

Table 15. continued

Select Area Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
12 hrs	Deep River - Fall (cont.)	Sep 19, 7 PM - Sep 20, 7 AM	6" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.	Deep River select fishing area (concurrent waters up to Highway 4 Bridge, Washington only above). Permanent transportation rules are in effect. Salmon and sturgeon.
12 hrs		Sep 23, 7 PM - Sep 24, 7 AM	Same.	Same.
12 hrs		Sep 24, 7 PM - Sep 25, 7 AM	Same.	Same.
12 hrs		Sep 25, 7 PM - Sep 26, 7 AM	Same.	Same.
12 hrs		Sep 26, 7 PM - Sep 27, 7 AM	Same.	Same.
14 hrs		Sep 30, 6 PM - Oct 1, 8 AM	Same.	Same.
14 hrs		Oct 1, 6 PM - Oct 2, 8 AM	Same.	Same.
14 hrs		Oct 2, 6 PM - Oct 3, 8 AM	Same.	Same.
14 hrs		Oct 3, 6 PM - Oct 4, 8 AM	Same.	Same.
14 hrs		Oct 7, 6 PM - Oct 8, 8 AM	Same.	Same.
14 hrs		Oct 8, 6 PM - Oct 9, 8 AM	Same.	Same.
14 hrs		Oct 9, 6 PM - Oct 10, 8 AM	Same.	Same.
14 hrs		Oct 10, 6 PM - Oct 11, 8 AM	Same.	Same.
14 hrs		Oct 14, 6 PM - Oct 15, 8 AM	Same.	Same.
14 hrs		Oct 15, 6 PM - Oct 16, 8 AM	Same.	Same.
14 hrs		Oct 16, 6 PM - Oct 17, 8 AM	Same.	Same.
14 hrs		Oct 17, 6 PM - Oct 18, 8 AM	Same.	Same.
14 hrs		Oct 21, 6 PM - Oct 22, 8 AM	Same.	Same.
14 hrs		Oct 22, 6 PM - Oct 23, 8 AM	Same.	Same.
14 hrs		Oct 23, 6 PM - Oct 24, 8 AM	Same.	Same.
14 hrs	Oct 24, 6 PM - Oct 25, 8 AM	Same.	Same.	
14 hrs	Oct 28, 6 PM - Oct 29, 8 AM	Same.	Same.	
14 hrs	Oct 29, 6 PM - Oct 30, 8 AM	Same.	Same.	

Table 15. continued

Select Area Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
14 hrs	Deep River - Fall (cont.)	Oct 30, 6 PM - Oct 31, 8 AM	6" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.	Deep River select fishing area (concurrent waters up to Highway 4 Bridge, Washington only above). Permanent transportation rules are in effect. Salmon and sturgeon.
12 hrs	Steamboat Slough - Fall	Sep 3, 7 PM - Sep 4, 7 AM	6" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on leadline.	Steamboat Slough select fishing area (concurrent waters). Fishers may transport their catch outside of fishing area with a permit issued by an authorized agency employee after examining the catch. Salmon and sturgeon.
12 hrs		Sep 4, 7 PM - Sep 5, 7 AM	Same.	Same.
12 hrs		Sep 5, 7 PM - Sep 6, 7 AM	Same.	Same.
12 hrs		Sep 9, 7 PM - Sep 10, 7 AM	Same.	Same.
12 hrs		Sep 10, 7 PM - Sep 11, 7 AM	Same.	Same.
12 hrs		Sep 11, 7 PM - Sep 12, 7 AM	Same.	Same.
12 hrs		Sep 12, 7 PM - Sep 13, 7 AM	Same.	Same.
12 hrs		Sep 16, 7 PM - Sep 17, 7 AM	Same.	Same.
12 hrs		Sep 17, 7 PM - Sep 18, 7 AM	Same.	Same.
12 hrs		Sep 18, 7 PM - Sep 19, 7 AM	Same.	Same.
12 hrs		Sep 19, 7 PM - Sep 20, 7 AM	Same.	Same.
12 hrs		Sep 23, 7 PM - Sep 24, 7 AM	Same.	Same.
12 hrs		Sep 24, 7 PM - Sep 25, 7 AM	Same.	Same.
12 hrs		Sep 25, 7 PM - Sep 26, 7 AM	Same.	Same.
12 hrs		Sep 26, 7 PM - Sep 27, 7 AM	Same.	Same.
14 hrs		Sep 30, 6 PM - Oct 1, 8 AM	Same.	Same.
14 hrs		Oct 1, 6 PM - Oct 2, 8 AM	Same.	Same.
14 hrs		Oct 2, 6 PM - Oct 3, 8 AM	Same.	Same.
14 hrs		Oct 3, 6 PM - Oct 4, 8 AM	Same.	Same.
14 hrs		Oct 7, 6 PM - Oct 8, 8 AM	Same.	Same.

Table 15. continued

Select Area Seasons (continued)				
Days	Season	Dates	Special Regulations	
			Gear	Area/Other
14 hrs	Steamboat Slough - Fall (cont.)	Oct 8, 6 PM - Oct 9, 8 AM	6" max. mesh size restriction. Nets may not exceed 100 fathoms in length. No weight restriction on headline.	Steamboat Slough select fishing area (concurrent waters). Fishers may transport their catch outside of fishing area with a permit issued by an authorized agency employee after examining the catch. Salmon and sturgeon. Same.
14 hrs		Oct 9, 6 PM - Oct 10, 8 AM	Same.	Same.
14 hrs		Oct 10, 6 PM - Oct 11, 8 AM	Same.	Same.
14 hrs		Oct 14, 6 PM - Oct 15, 8 AM	Same.	Same.
14 hrs		Oct 15, 6 PM - Oct 16, 8 AM	Same.	Same.
14 hrs		Oct 16, 6 PM - Oct 17, 8 AM	Same.	Same.
14 hrs		Oct 17, 6 PM - Oct 18, 8 AM	Same.	Same.
14 hrs		Oct 21, 6 PM - Oct 22, 8 AM	Same.	Same.
14 hrs		Oct 22, 6 PM - Oct 23, 8 AM	Same.	Same.
14 hrs		Oct 23, 6 PM - Oct 24, 8 AM	Same.	Same.
14 hrs		Oct 24, 6 PM - Oct 25, 8 AM	Same.	Same.
14 hrs		Oct 28, 6 PM - Oct 29, 8 AM	Same.	Same.
14 hrs		Oct 29, 6 PM - Oct 30, 8 AM	Same.	Same.
14 hrs		Oct 30, 6 PM - Oct 31, 8 AM	Same.	Same.

Date		Chinook	Steelhead	Coho	Walleye
Aug.	C & S	90	960	30	0
Aug. 28-Aug. 31	Ticket	17,368	759	2	2
	Other	5,343	85	64	1
	Total	22,711	844	66	3
Sept. 4-7	Ticket	27,613	674	5	0
	Other	5,000	592	24	0
	Total	32,613	1,266	29	0
Sept. 11-14	Ticket	30,434	1,948	141	3
	Other	10,232	496	425	0
	Total	40,666	2,444	566	3
Sept. 16-20	Ticket	17,002	3,013	0	0
	Other	7,663	666	479	0
	Total	24,665	3,679	479	0
Sept. 27-29	Ticket	3,860	2,716	126	0
	Other	5,680	1,532	333	2
	Total	9,540	4,248	459	2
Sept. 15-Dec	C & S	337	320	20	0
Totals	Ticket	96,277	9,110	274	7
	Other	33,918	3,371	1,325	1
	C&S	427	1,280	50	0
Grand Total		130,622	13,761	1,649	8

¹. Ticket catch estimates based on final post-season landings.

	Stock						
	LRH	LRW	BPH	URB	MCB ²	Other ³	Total
Non-Indian Fisheries³							
Recreational ⁴	10,247	562	5,790	22,974	10,261	1,036	50,870
Early August Commercial	2,905	0	2,326	858	1,080	626	7,795
Late Aug/Sept Commercial	2,901	1,143	8,536	4,498	3,589	44	20,711
October Commercial	235	658	0	741	4,344	13	5,991
Select Area Commercial	3,887	0	623	784	424	2,183	7,901
Subtotal	20,175	2,363	17,275	29,855	19,698	3,902	93,268
Treaty Indian Fisheries							
Sales to Licensed Buyers	272	161	44,589	30,551	12,824	219	88,616
C&S and Other non-ticketed catch	10	0	2,121	26,703	11,313	0	40,147
Subtotal⁵	282	161	46,710	57,254	24,137	219	128,763
Total	20,457	2,524	63,985	87,109	43,835	4,121	222,031

¹. Based on preliminary inseason phone survey catch estimates.

². Includes lower river bright (LRB) stock.

³. Includes Select Area bright (SAB) and out-of-basin stocks.

⁴. Includes sport catch from mouth to Priest Rapids Dam.

⁵. Landings for treaty Indian fisheries do not include Aug-Dec C&S catch.

Table 18. Summary of 2002 Fall Fishery Impacts.¹								
Season	Fall Chinook Catch	Snake R. Wild Fall Chinook		Total Steelhead Catch	Wild Steelhead			
		No.	%		Group A		Group B	
					No.	%	No.	%
Treaty Indian Fisheries	129,200	NA	20.68	13,760	1,810	2.1	1,910	5.8
Non-Indian Fisheries	91,200	NA	7.34	38,200	970	1.1	460	1.4
Total	200,400	NA	28.2	51,960	2,780	3.5	2,370	3.7

¹. Based on preliminary inseason phone survey catch estimates.

Table 19. Fishing Area and Spring Creek Sanctuary Restrictions in Effect During Treaty Indian Fall Commercial Set Gillnet Seasons, 1988-2002.		
Year	Open Area	Spring Creek Sanctuary
1988	All of Zone 6	Small sanctuary Aug 10-27 and Sep 12-24. Large sanctuary Aug 29-Sep 21
1989	"	Small sanctuary Aug 7-26 and Sep 27-29. Large sanctuary Aug 28-Sep 27
1990	All of Zone 6 except closed below Hood River Bridge Sep 10-12	Small sanctuary Aug 8-25 and Sep 24-29. Large sanctuary Aug 27-Sep 22
1991	"	Small sanctuary Aug 12-Sep 10. Reduced to 50' radius Sep 10-Oct 28
1992	All of Zone 6 except Spring Creek Sanctuary Area only open Sep 7-15 and Bonneville Pool closed Sep 17-19	Small sanctuary Aug 10-22. Reduced to 50' radius Sep 2-5. Large sanctuary Sep 23-Oct 12
1993	All of Zone 6 except Bonneville Pool closed Sep 13-18	Small sanctuary August 9-28. Large sanctuary Aug 30-Oct 2.
1994	All of Zone 6	Large sanctuary Aug 29-Sep 10. Reduced to 50' radius Oct 12-15
1995	"	Large sanctuary all season
1996	All of Zone 6 except closed below Hood River Bridge Sep 23-28	Large sanctuary all season
1997	All of Zone 6 except closed below Hood River Bridge Sep 9-13	Large sanctuary Aug 7-Sep 6. Enlarged sanctuary from Light #27 to Light #35, Washington shore to mid-channel, Sep 17-20
1998	All of Zone 6 except closed below Hood River Bridge Sep 8-12	Large sanctuary Sep. 1-12. Enlarged sanctuary from Light #27 to Light #35, Washington shore to mid-channel, September 15-28
1999	All of Zone 6	Small sanctuary all season
2000	"	Large sanctuary all season
2001	"	Large sanctuary Aug 28-Sep 8. Small sanctuary Sep 11-29
2002	"	Large sanctuary Aug 28-Aug 31. Small sanctuary Sep 11-28

Table 20. Number of Adult Chinook, Coho, Steelhead, and Sturgeon Landed During Treaty Indian Fall Seasons (Aug-Nov) Above Bonneville Dam, 1970-2002.

Year	Season ²	Fishing Days ³	Numbers Landed ¹			
			Chinook Adults	Coho	Steelhead ⁴	White Sturgeon ⁵
1970	Aug. 9-Oct. 16	48	34,800	21,300	11,400 (13,200)	200
1971	Aug. 9-Oct. 15	49	50,900	17,100	22,500 (25,700)	600
1972	Aug. 9-Oct. 13	46	39,000	9,600	25,100 (28,800)	500
1973	Aug.12-Oct. 12	56	57,000	11,400	26,200 (26,800)	400
1974	Aug. 8-Oct. 18	63	51,100	6,900	12,900 (13,200)	400
1975	Aug. 8-Oct 10	54	122,300	6,000	7,000 (7,800)	600
1976	Aug. 8-Oct. 18	60	121,500	4,600	8,800 (11,800)	300
1977	Aug. 25-Sept. 13	19	46,300	1,000	31,300 (36,000)	200
1978	Aug. 25-Oct. 3	27	56,200	4,400	15,800 (19,100)	400
1979	Aug. 25-Sept. 18	18	59,900	4,600	5,900 (8,500)	300
1980	Sept. 2-Sept. 11	5	32,600	300	4,700 (9,600)	200
1981	Sept. 1-Sept. 18	10	48,900	1,800	5,100 (9,400)	100
1982 ⁶	Sept. 1-Nov. 5	14	53,600	4,300	5,100 (8,300)	100
1983	Aug. 31-Oct. 7	15	22,800	200	14,800 (18,300)	200
1984	Aug. 6-Oct. 15	32	50,900	1,600	68,900 (78,200)	700
1985 ⁷	Aug. 23-Sept. 28	29	68,300	5,300	75,600 (91,300)	1,800
1986 ⁸	Aug. 18-Oct. 4	37	102,300	40,300	62,500 (73,200)	4,300
1987 ⁹	Aug. 10-Oct. 15	46	138,600	2,400	65,900 (86,000)	4,400
1988 ¹⁰	Aug. 10-Oct. 1	35	145,700	2,700	59,000 ¹³ (81,800)	2,000
1989 ¹¹	Aug. 7-Sept. 29	36	128,200	8,700	51,400 (65,800)	--
1990 ¹²	Aug. 8-Sept. 29	34	79,300	2,900	29,000 (36,800)	1,700
1991 ¹³	Aug. 12-Oct. 28	20	51,100	12,800	34,900 (46,700)	--
1992	Aug. 10-Oct. 17	32	28,100	1,000	47,900 (59,500)	100
1993	Aug. 9-Oct. 2	26	30,400	1,000	25,300 (33,300)	100
1994 ¹⁴	Aug. 29-Oct. 15	10	33,700	1,300	15,500 (18,800)	500
1995	Aug. 29-Sept. 15	9	41,400	400	20,400 (22,800)	400
1996	Sept. 2-Sept. 28	17	63,200	700	18,600 (23,200)	300
1997	Aug. 27-Sept. 20	16	65,000	600	22,700 (27,800)	<100
1998	Aug. 25-Sept. 25	22	44,700	1,500	12,600 (16,900)	<100
1999	Aug. 31-Oct. 2	22	77,200	2,300	17,350 (20,600)	0
2000	Aug. 30-Sept. 23	17	52,100	6,300	15,500	0
2001 ¹⁵	Aug. 28-Sept. 29	18	111,700	5,400	29,200	700
2002	Aug 28-Sep 28	18.5	130,600	1,600	13,800	209

1. Includes Spring Creek terminal area fishing since 1975 (1977-83 & 92), sales to the general public and C&S catches beginning in 1994, Klickitat R. dipnet catches during open mainstem seasons, and extended Klickitat River commercial seasons beginning in 1988.

2. Minimum mesh size: 1970-1974 none; 1975 7-1/2"; 1976-1982 8"; 1983 none; 1984 none, except 8" Oct 9-15; 1985 none, except 8" Sep 14-28; 1986 none, except 8" Sep 6-Oct 4; 1987 none; 1988 none, except 8" Aug 17-27 and Sep 18-24 and 8" and 9" test fishery Sep 28-Oct 1; 1989 8" except none Aug 7-12; 1990 8" except none Sep 3-5, Sep 12-15 below Hood River Br., Sep 17-22, and Sep 24-29; 1991-97 none; 1998 8"; 1999 none except 8" Sep 15-18 and Sep 29-Oct 2; 2000-2002 none.

3. Mainstem commercial seasons only.

4. Steelhead run year totals are in parentheses. Sales to licensed buyers during sockeye and fall seasons only through 1984. Sales to licensed buyers, general public and C&S catch, including winter season catches of holdover and fresh run summer steelhead, for calendar year from 1985-present.

5. No sturgeon sales allowed in set net fisheries since 1991. Includes landings in set-line fisheries.

6. *Includes Nov 1-5 coho fishery below Klickitat River.*
7. *Spring Creek sanctuary area open to fishing Aug 23-28 and Aug 29-Sep 3.*
8. *Includes Sep 29-Oct 4 dipnet and experimental gillnet fishery. An additional catch of 1,000 chinook occurred above Priest Rapids Dam. Over half of the coho catch (24,100) occurred in the Klickitat River dipnet fishery.*
9. *An additional catch of 2,200 chinook occurred above Priest Rapids Dam.*
10. *Includes Sep 28-Oct 1 test fishery in John Day Pool. No sturgeon sales allowed after Sep 3. An additional catch of 2,300 chinook and an estimated 300 steelhead occurred above Priest Rapids Dam. Includes 5,500 coho captured in an extended Klickitat River dipnet season.*
11. *No sturgeon sales allowed. An additional catch of 800 chinook occurred above Priest Rapids Dam. Includes 6,100 coho captured in an extended Klickitat River dipnet season.*
12. *An additional 200 chinook catch occurred above Priest Rapids Dam. Includes 1,900 coho captured in an extended Klickitat River dipnet season.*
13. *Includes 5,500 coho captured in an extended Klickitat River dipnet season.*
14. *An additional catch of 570 chinook and 70 steelhead occurred above Priest Rapids Dam. An additional catch of 220 chinook and 80 steelhead occurred above McNary Dam.*
15. *Target sturgeon set gillnet seasons adopted for Zone 61 (Bonneville Pool) during November 14-30 and Zone 63 (John Day Pool) during November 14-December 7.*

Year	Group A Index		Group B Index	
	Number	% of wild run ¹	Number ²	% of wild run ¹
1985	10,800	20.7	4,000	31.0
1986	7,800	13.8	2,700	26.7
1987	16,800	15.7	5,200	37.2
1988	11,000	17.1	4,200	23.4
1989	9,000	15.9	4,300	35.0
1990	4,300	16.0	1,900	21.5
1991	8,800	14.6	1,900	30.0
1992	7,200	16.2	3,300	26.3
1993	4,400	15.2	800	19.1
1994	2,200	10.3	1,000	18.6
1995	2,700	10.4	300	18.6
1996	2,300	8.9	1,400	34.8
1997	3,200	10.4	600	14.3
1998	3,100	8.8	500	15.6
1999	4,300	7.6	500	12.6
2000	2,300	3.7	1,000	11.4
2001	5,500	4.0	1,400	11.4
2002	2,400	2.0	1,100	3.4

1. Percentage calculated before rounding. Steelhead impacts based on date method through 1998 and fork length index method thereafter.
2. Includes sales to licensed buyers only prior to 1994. Includes sales to the general public and C&S catch beginning in 1994.

	Non-Indian Sport				Treaty Indian Commercial				Subsistence
	Bonneville	The Dalles	John Day	Total	Bonneville	The Dalles	John Day	Total	
1991	2,270	200	150	2,620	1,000	460	40	1,500	NA
1992	1,720	140	150	2,010	1,150	430	20	1,600	210
1993	2,310	160	140	2,610	1,420	580	10	2,010	260
1994	2,220	155	235	2,610	1,175	310	115	1,600	650
1995	1,370	50	90	1,510	1,420	310	310	2,040	1,150
1996	1,360	90	80	1,530	1,000	230	360	1,590	480
1997	1,470	180	480	2,130	1,852	498	1,260	3,610	236
1998	1,625	857	599	3,081	1,462	1,108	1,100	3,670	240
1999	1,236	694	422	2,352	1,280	1,051	760	3,091	244
2000	1,262	809	437	2,508	1,145	1,456	846	3,447	324
2001	1,422	677	300	2,399	1,019	1,258	684	2,961	476
2002	1,560	878	187	2,581	490	1,138	322	1,950	370

Table 23. Time, Area, and Gear Restrictions in Effect for Non-Indian Mainstem Fisheries Occurring During the Early Fall Fishing Seasons, 1980-2002.

Year	Date(s)	Hours	Area	Mesh Size
1980	Sept 2-3	6pm-6pm	Zone 1	None
1982	Aug 30-31	6pm-6am	Zone 1	8" minimum
1983	Sept 1-2	"	Zone 1	None
1986	July 30 - Aug 1	6pm-6am nightly	Zone 1	9" minimum
	Aug 4-6	"	Zone 1	9" minimum
1987	Aug 9-12	"	Zones 1 and 2	8" minimum
1988	Aug 14-15	6pm-5am	Zone 1 below Astoria-Megler Bridge	8" minimum
	"	6pm-noon	Zones 1-5 above Astoria-Megler Bridge	8" minimum below Longview Bridge and 9" minimum above
1989	Aug 7-11	6pm-6am	Zones 1-5	"
	Aug 13-14	"	Zones 3-5	"
	Aug 14-15	"	Zones 2-5 above Wauna powerlines	"
	Aug, 25, 27-29	6pm-6am nightly	Area 2S	9" minimum
1990	Aug 12-17, Aug 19-24	"	Extended Area 2S above I-205 Bridge	"
1991	Aug 25-29	"	"	"
1992	Sep 8-9	6pm-6am	Zone 1	None
1996	Aug 26-29	8pm-6am nightly	Area 2S	9" minimum
1997	Aug 4-5, Aug 24-25	9pm-3am, 8pm-6am	Zone 1, Area 2S	"
1998	Aug 4-5	5pm-5am	Zones 1-3	"
	Aug 25-26	8am-6am	Area 2S	"
1999	Aug 4-5	7pm-7am	Zones 1-3 below Longview Bridge	"
	Aug 23-24	8pm-6am	Area 2S	"
2000	Aug 3-4	7pm-7am	Zones 1-3 below Longview Bridge	"
2001	Aug 4-5	7pm-7am	Zones 1-3 below Longview Bridge	"
	Aug 8-9	10am-6pm	Zone 1	"
	Aug 20-25	8pm-6am nightly	Extended Area 2S above I-205 Bridge	"
2002	Aug 4-5, Aug 6-7, Aug 8-9, Aug 9-10	7pm-7am nightly	Zones 1-3 below Longview Bridge	8" minimum
	Aug 11-12	7pm-7am	Zones 2-3	"
	Aug 18-19, Aug 20-21, Aug 22-23, Aug 25-26, Aug 27-28	8pm-6am nightly	Extended Area 2S above I-205 Bridge	9" minimum

Table 24. Number of Adult Chinook, Chum, Coho, Steelhead, and Sturgeon Landed During Early Fall Mainstem Columbia River Seasons Below Bonneville Dam, 1970-2002.

Year	Season ¹	Fishing Days	Chinook			Sturgeon	
			Adults	Coho	Steelhead ²	White	Green
1970	August 9-26	13	142,100	66,600	6,200	2,000	1,000
1971	August 8-25	13	91,900	31,900	9,600	2,900	1,000
1972	August 9-25	12	94,400	18,800	3,800	2,700	900
1973	August 12-24	10	101,200	10,900	6,800	1,800	1,000
1974	August 11-23	10	51,700	20,100	2,600	3,900	2,700
1975	August 10-22	10	92,100	6,600	--	4,900	1,000
1976	August 8-18	7	31,700	2,500	--	8,300	1,400
1977	August 14-23	7	67,000	4,400	--	4,300	600
1978	August 15-21	4	38,900	1,300	--	2,700	1,600
1979	August 14-16	2	28,100	1,800	--	2,300	700
1980	September 2-3	1	58,400	7,000	--	1,700	600
1981	None	0	--	--	--	--	--
1982	August 30-31	0.5	79,200	5,800	--	500	300
1983	September 1-2	0.5	15,400	200	--	1,200	600
1984	None	0	--	--	--	--	--
1985	None	0	--	--	--	--	--
1986	July 30-August 6	4	800	0	--	5,400	5,100
1987	August 9-12	3	11,500	100	--	3,900	3,200
1988	August 14-15	0.5	51,100	300	--	1,700	2,300
1989	August 7-29	13	29,800	100	--	1,800	0
1990	August 12-24	10	6,700	20	--	1,500	0
1991	August 25-29	4	5,400	10	--	500	0
1992	September 8-9	0.5	2,200	400	--	800	1,800
1993	None	0	--	--	--	--	--
1994	None	0	--	--	--	--	--
1995	None	0	--	--	--	--	--
1996	August 26-29	3	4,400	0	--	300	0
1997	August 4 - 25	2	1,300	1	--	2,000	1,500
1998	August 4 - 26	2	1,800	0	--	2,600	700
1999	August 4 - 24	2	1,400	0	--	2,900	500
2000	August 3-23	3	7,400	200	--	2,800	600
2001	August 5-25	7	6,600	660	--	5,700	340
2002	August 4-28	10	20,100	60	--	1,800	0

^{1.} Minimum mesh size: 1970-1974 7-1/4"; 1975-1979 8"; 1980-2002 see Table 23.

^{2.} Sale of steelhead by non-Indians prohibited since 1975. Annual handling and mortality limited by time, area, and gear regulations.

Table 25. Closed Fishing Areas During Late Fall Mainstem Non-Indian Fishing Seasons, 1999-2002.

Year	Date(s)	Closed Area
1999	Sept 20-Oct 7	Longview Bridge-Beacon Rock
	Oct 11-22	Longview Bridge-Upper Bachelor Island
	Oct 27-28	Buoy 10 - Harrington Point/Settler Point Line
2000	Sep 19-20	Longview Bridge-Lower Bachelor Island
	Sep 18, Sep 25-Oct 5	Longview Bridge-Beacon Rock
	Oct 9-20	Longview Bridge-Lower Bachelor Island
	Oct 23-27	Upper Cottonwood Island-Lower Bachelor Island
	Oct 30	Buoy 10-Settler Point/Harrington Point line and upper Cottonwood Island-lower Bachelor Island
2001	Sep 17-21	Longview Bridge-I-205 Bridge
	Sep 24-28	Kalama River-I-205 Bridge
	Oct 1-5	Upper Bachelor Island-I-205 Bridge
	Oct 29-31	Buoy 10-Settler Point/Harrington Point line
2002	Sep 16, Sep 19	Longview Bridge-Beacon Rock
	Sep 19-20	Buoy 10-Lewis River
	Sep 24-26	Longview Bridge-Lewis River
	Sep 26-27	Buoy 10-Lewis River
	Oct 28-31	Buoy 10- Settler Point/Harrington Point line and Green Navigation Marker 85-Beacon Rock

Table 26. Number of Adult Chinook, Coho, Steelhead, and Sturgeon Landed during Late Fall Mainstem Columbia River and Select Area Seasons (mid-Sep to mid-Nov) below Bonneville Dam, 1970-2002.

Year	Mainstem Season ¹	Mainstem Fishing Days	Chinook		Coho			Sturgeon ⁵		
			Columbia Mainstem	Select Area ²	Columbia Mainstem	Select Area ²	Chum ³	Steelhead ⁴	White	Green
1970	Sep 10-Nov 5	35	93,900	700	432,500	21,700	600	6,200	1,300	100
1971	Sep 12-Nov 3	34	119,600	100	224,400	8,000	500	6,300	1,800	200
1972	Sep 20-Nov 3	27	39,400	900	103,100	9,300	1,300	9,200	1,600	100
1973	Sep 12-Nov 2	32	158,400	300	166,000	6,800	1,400	13,000	2,400	200
1974	Sep 17-Nov 1	29	43,300	100	231,800	9,100	900	1,200	4,800	400
1975	Sep 10-Nov 7	39	72,700	< 100	148,000	2,100	500	--	5,300	300
1976	Sep 7-Nov 12	47	105,400	300	160,700	5,200	1,200	--	8,100	1,200
1977	Sep 8-Oct 27	23	90,400	1,700	33,100	1,600	200	--	2,300	200
1978	Sep 10-Nov 15	37	64,900	500	128,000	3,400	1,500	--	3,900	100
1979	Sep 11-Nov 7	30	65,300	1,600	103,200	22,500	100	--	13,500	500
1980	Sep 28-Oct 16	12	14,600	40,000	114,200	28,900	200	--	3,100	50
1981	Sep 27-Nov 12	25	5,200	24,900	47,400	12,400	1,400	--	6,700	100
1982	Oct 3-Nov 12	27	4,500	6,000	181,600	14,300	1,800	--	4,600	400
1983 ⁶	Oct 4-Oct 13	4	4,800	4,700	3,600	3,600	200	--	4,500	100
1984	Sep 10-Nov 16	35	60,300	3,600	160,900	40,600	1,800	--	9,800	2,700
1985	Sep 16-Nov 15	39	56,400	3,600	138,800	51,200	700	--	4,900	1,500
1986	Sep 12-Nov 14	43	153,000	4,600	925,400	55,600	1,800	--	4,100	800
1987	Sep 13-Nov 12	35	280,900	36,900	150,900	16,900	1,300	--	4,100	1,600
1988	Sep 12-Nov 11	41	242,200	28,800	311,100	51,400	2,500	--	3,100	1,000
1989	Sep 17-Nov 15	36	95,700	6,600	360,700	28,100	1,300	--	2,700	1,700
1990	Sep 18-Oct 31	26	35,300	3,100	47,400	27,600	800	--	3,100	2,200
1991 ⁷	Sep 10-Nov 5	32	33,500	2,100	324,400	82,100	400	--	2,400	3,200
1992	Sep 22-Oct 30	22	14,100	1,500	37,900	19,600	700	--	4,200	400
1993	Sep 20-Oct 20	17	16,700	300	20,600	15,500	40	--	7,100	2,200
1994	Oct 9-Oct 19	4	1,500	100	6,000	57,800	20	--	3,400	200
1995	Oct 9 & Oct 12	2	50	500	200	22,300	0	--	6,000	400
1996 ⁸	Sep 16-Oct 25	17	7,600	5,000	5,600	22,400	20	--	7,200	600
1997 ⁹	Sep 24-Nov 7	23	3,800	4,000	3,800	17,100	39	--	7,800	100
1998 ¹⁰	Oct 7-Nov 6	7	1,000	2,100	300	23,600	11	--	10,900	900
1999 ¹¹	Sep 20-Nov 4	23	4,600	2,100	57,600	23,000	101	--	4,100	300
2000 ¹²	Sep 18-Nov 1	21	3,440	2,300	110,400	58,300	26	--	4,600	600
2001 ¹³	Sep 17-Oct 31	33	14,900	3,100	219,100	33,800	116	--	21 ¹⁴	0 ¹⁴
2002¹⁵	Sep 16-Oct 31	21	16,100	8,700	99,500	70,400	12	--	4,700	200

1. Mesh restriction of 7" or less and 9" or greater, 1980-1982.

2. Number of Oregon and Washington terminal areas and fishing days vary from year to year, and some early fall fisheries are included. Between 1983 and 1995 only Oregon terminal fisheries occurred. Prior to 1979, landings listed for Youngs Bay are minimal as Youngs Bay salmon could be sold outside of the bay during concurrent mainstem fishing periods.

3. Includes 1970-present Youngs Bay Select Area, 1980-1982 Washington terminal, and 1996-present Big Creek, Tongue Point, Blind Slough, and Deep River Select Area, and 2000-present Steamboat Slough Select Area landings.

4. Sale of steelhead by non-Indians prohibited since 1975. Handling and mortality limited by time, area, and gear regulations.

5. Includes landings from Select Area fall fisheries beginning in 1997.

6. Dates reflect coho season only. Six days of large-mesh sturgeon fishing occurred Oct 18-Nov 3 with sale of chinook allowed.

7. Sep 10 and 17 daylight only coho target fishery. Late fall season opened on Sep 22.

8. Sep 16-20 extended 2S night time fishery. Sep 30-Oct 25 all of Zones 1-5.
9. Sep 24-Oct 3 Zone 1-Longview Bridge 6" max. mesh and I-5 Bridge to Zone 5 9" min. mesh; Oct 6-Nov 7 Zones 1-5, 8" min. mesh after Oct 26.
10. Oct. 7 – Nov 4 Zones 1-5, 9" min. mesh.
11. Sep 20 - Oct 28, target coho fisheries with 6" max. mesh; Oct 11, 18, 25, and 27, salmon/sturgeon fisheries with 9 ¾" max.; Oct 5-7 salmon fishery with 8" min mesh; Nov. 4 daylight target sturgeon fishery with 9" min and 9 ¾" max mesh.
12. Sept. 18-Oct. 30 target coho fisheries w/6" max mesh size; Sept. 19-20 target salmon/sturgeon fishery w/8" min. and 9 ¾" max. mesh restrictions; Oct. 9, 16, and 23 sturgeon/salmon fisheries with 6" max. or 9" min. to 9 ¾" max. mesh; Nov. 1 daylight sturgeon fishery with 9" min. and 9 ¾" max. mesh size .
13. Sept. 17-19 target coho fishery w/ 6" max mesh size; Sept. 17-Oct. 4 salmon fishery w/ 8"min and 9 ¾" max mesh size; Sept. 20-Oct. 5 salmon fisheries w/9 ¾" max mesh size; Oct. 8-26 salmon fishery w/9 ¾" max mesh size; Oct. 29-31 target coho w/6" max. mesh.
14. The sturgeon harvest guideline for 2001 had been reached by late August, which accounts for the low number (21 white sturgeon landed in August Youngs Bay SAFE fishery).
15. Season specific information (i.e., seasons, areas, and gear restrictions) is included in Table 15.

Year	White Sturgeon					Green Sturgeon				
	Sport	Commercial ¹				Sport	Commercial ¹			
		Winter	Early Fall	Late Fall	Total		Winter	Early Fall	Late Fall	Total
1991	22,700	840	530	2,430	3,800	20	4	2	3,180	3,186
1992	40,100	1,210	790	4,240	6,240	75	10	1,750	400	2,160
1993	37,900	1,020	--	7,050	8,070	15	1	--	2,220	2,221
1994	33,500	3,030	--	3,380	6,410	130	1	--	240	241
1995	45,100	110	--	6,040	6,150	20	--	--	390	390
1996	42,800	1,380	330	6,670	8,380	65	1	--	610	610
1997	38,200	3,064	1,971	7,792	12,827	41	2	1,474	138	1,614
1998	41,600	2,675	2,634	8,585	13,894	73	0	743	151	894
1999	39,800	2,303	2,854	4,336	9,493	93	2	508	279	789
2000	40,500	2,795	2,790	4,560	10,145	32	0	568	636	1,204
2001	41,200	3,549	5,740	21 ²	9,310	50	4	338	0 ²	342
2002	38,500	3,368	1,725	4,522	9,615	51	7	0 ³	156	163

¹. Includes Youngs Bay and other Select Area fisheries landings.

². Sturgeon sales prohibited in mainstem and Select Area fisheries effective August 22.

³. Green sturgeon sales prohibited during all early fall seasons.

Table 28. Columbia River Fishery Model Summary (MR2003 Final)

2003 Fisheries. Non-Indian fisheries at 8.25% URB. URB share 52% sport/48% commercial.															
Fishery Descriptions										Management Benchmarks					
Ocean Fisheries:	Final PFMC									Chinook:	<i>Non-Ind</i>	<i>Tr. Ind.</i>	<i>Total</i>	<i>Limit or Goal</i>	
Inriver Fisheries:	77%	Aug 1 for chinook & marked coho, 1 chinook limit, chinook open thru Labor Day								Projected SRW impacts:	8.25%	23.04%	31.29%	31.29%	
Buoy 10 sport	90%	Aug 1 for chinook & marked coho								% of Total	26%	74%	100%		
Mainstem sport	3	days Early to mid-August salmon fishery								% of Harvestable Surplus	25.2%	34.0%			
Commercial	2	days Zone 4-5 late August								McNary Escapement:			117,330	43,500	
	4	days Mid-late Sept chin/coho (~Z1-5)								LRH Ocean/Inriver AEQ Exploitation Rate			47.0%	49.0%	
	1	month October coho/chinook								NI Catch	<i>Sport:</i>	41,400	<i>Comm.</i>	42,500	
Upriver sport	100%	August 1		Hanford sport open August 16						catch: 6,120					
Treaty Indian	5	weeks								B Index Steelhead:	Constraint	2.0%	15.0%	17.0%	
										Projected impact	1.7%	15.0%	16.7%		
										Coho:					
										% of Upriver Run to Bonn. Dam			52%	50%	
										WA Late Hatchery Coho to Tributaries			76,500		
										Freshwater harvest rate on LCR wild coho			7.6%	11.5%	
										Chum: (Harvest Index)			2%	5%	

	Chinook										Upriver Steelhead						Coho				Chum		
	Total	BPH	URB	LRH	LRW	BUB	PUB	LRB	SAB	Snake R Wild Num.	%	Total	Skam. Total	Upriver A Index Hatch.	Upriver B Index Wild	Hatch.	Wild	Total	Un-marked	Upriver	LCR Wild	Total	
Ocean Catch/Mortality	80,500	32,870	9,730	32,780	1,860	1,620	1,640	70				-						385,378	11,761	30,176	13.0%		
Columbia River Run	595,260	101,890	258,400	116,900	23,440	43,130	43,500	1,840	6,160			370,520	17,000	215,850	70,870	55,240	11,600	428,963	60,971	77,195		20,000	
Non-Indian (Total)	90,020	10,300	27,440	25,800	5,140	12,030	3,820	510	4,980		8.25%	34,224	1,485	25,005	883	6,660	203	176,394	17,027	23,398	20.6%	319	
Early August Salmon	10,350	2,670	1,970	3,470	60	1,000	280	40	860		0.76%	121	0	64	22	16	4	100	16	21	0.0%	0	
Select Areas	10,280	1,070	660	5,020	0	370	30	20	3,110		0.26%	6	0	3	1	1	0	14,297	4	0	0.1%	27	
Buoy 10 Sport	17,910	4,190	4,030	6,120	340	1,350	940	60	880		1.56%	105	0	0	0	101	3	36,737	1,148	3,630	1.8%	0	
Lower River Sport	13,390	520	5,880	3,090	160	2,570	990	110	70		2.28%	8,920	395	6,585	222	1,676	36	3,000	45	271	0.1%	0	
2S Mid - Late August	6,510	1,310	2,140	960	0	1,380	650	60	10		0.83%	127	0	0	0	105	23	0	0	0	0.0%	0	
Sept chin, 2S, 8" min	0	0	0	0	0	0	0	0	0		0.00%	0	0	0	0	0	0	0	0	0	0.0%	0	
Mid September	0	0	0	0	0	0	0	0	0		0.00%	0	0	0	0	0	0	0	0	0	0.0%	0	
Late September	11,080	510	4,940	1,530	1,210	2,230	520	100	40		1.91%	249	0	146	20	62	20	45,000	8,803	8,649	4.1%	0	
October Coho	4,250	30	530	110	520	2,910	20	120	10		0.20%	96	0	56	8	79	17	70,000	9,002	9,569	1.4%	292	
Late Fall sturgeon	0	0	0	0	0	0	0	0	0		0.00%	0	0	0	0	0	0	0	0	0	0.0%	0	
Tributary Sport	8,350	0	0	5,500	2,850	0	0	0	0		-							6,000	10	0	0.1%	0	
Lower River Subtotal	82,120	10,300	20,150	25,800	5,140	11,810	3,430	510	4,980		7.80%	9,624	395	6,855	273	2,040	103	175,134	17,027	22,138	7.55%	319	
Sport (Bonn-Hwy 395 Br.)	1,780	0	1,170	0	0	220	390	0	0		0.45%	24,600	1,090	18,150	610	4,620	100	1,260		1,260		0	
Treaty Indian (Total)	122,656	33,472	59,530	-	-	11,406	18,250	-	-		23.04%	28,660	0	14,710	3,690	8,550	1,720					0	
Dam Counts																							
Bonneville Dam Passage	383,720	90,330	238,250	-	-	15,080	40,060	-	-			360,900	16,600	209,000	70,600	53,200	11,500	55,057		55,057		700	
McNary Dam	117,330	-	117,330	-	-	-	-	-	-														
Lower Granite Dam	-	-	-	-	-	-	-	-	-														
Escapement																							
Hatchery	-	33,850	-	49,990	-	15,955	2,932	-	-														
(WA only)	-	-	-	34,590	-	-	-	-	-														
Natural (WA)	-	-	-	32,400	14,780	-	-	-	-														
Natural (OR)	-	-	-	8,700	3,440	-	-	-	-														
Surplus (WA only)		26,850	73,830	35,710	9,080	10,200	930	-	-														

Table 29. Columbia River Fishery Model Summary (2002 Actual)

2002 Adopted PFMC Fisheries. Non-Indian Columbia River Fisheries at 8.25% SRW Impact.																								
Fishery Descriptions										Management Benchmarks														
Ocean Fisheries: Adopted PFMC Fisheries: Non-treaty Chinook 150K, Coho 120K; Treaty Chinook 60K, Coho 60K Inriver Fisheries: Buoy 10 sport Open Aug 1 - Dec 31 for chinook & marked coho; 2 fish bag thru Aug 23 Mainstem sport Open Aug 1 - Dec 31 for chinook, marked coho, and marked steelhead Commercial 5.0 days August salmon/sturgeon fishery, B-10 to LVB; TP to LVB (Aug 4-12) 5.0 days 2S salmon late August (Aug 18-28) 5.0 days September coho/chinook (Sept 16-30) 14.0 days October coho (Oct 1-31) Upriver sport Open Aug 1 - Dec 31 for chinook, marked coho, and marked steelhead Hanford sport open Aug 16-Dec 31 catch: 7,520 Treaty Indian 5 weeks All of Zone 6 between Aug 28 and Sept 28 8" minimum mesh size in all openings.										Chinook: Projected SRW impacts: % of Total 26% 74% % of Harvestable Surplus 23.6% 27.5% McNary Escapement: 141,680 43,500 LRH Inriver Harvest Rate NI Catch Sport: 48,900 Comm. 42,400 B Index Steelhead: Constraint 2.0% 15.0% 17.0% Projected impact 1.4% 5.9% 7.3% Coho: % of Upriver Run to Bonn. Dam 216% 50% Chum: (Harvest Index) 0% 5%					<i>Limit or Goal</i>									
	Chinook									Snake R Wild		Upriver Steelhead						Coho				Chum		
	Total	BPH	URB	LRH	LRW	BUB	PUB	LRB	SAB	Num.	%	Total	Skam. Total	Upriver A Index Hatch.	Upriver B Index Wild	Hatch.	Wild	Total	Un-marked	Upriver	OR Wild Early	Total	Total	
Ocean Catch/Mortality	87,210	39,960	7,400	36,280	1,020	1,310	1,240	50				-						128,934	5,173	8,001				
Columbia River Run	733,170	160,850	276,870	156,440	24,950	57,930	48,120	2,330	5,680			482,300	24,980	238,430	87,470	99,040	32,460	171,551	34,127	32,319			20,000	
Non-Indian (Total)	98,740	17,280	28,130	25,310	5,040	15,960	2,810	660	3,550		7.34%	38,212	2,290	24,225	969	10,376	457	209,561	26,301	44,744			12	
Early August Sign/Salm	7,760	2,330	860	2,910	0	930	110	40	580		0.31%	91	0	39	14	16	5	6					0	
Select Areas	7,900	620	780	3,890	0	390	20	20	2,180		0.28%	17	0	7	3	3	1	67,500					1	
Buoy 10 Sport	18,260	5,790	2,410	5,270	560	3,070	350	120	690		0.87%	111	0	0	0	108	4	6,200					0	
Lower River Sport	21,160	0	9,760	4,980	0	4,340	1,830	180	70		3.53%	3,710	0	2,500	141	1,021	52	3,000					0	
2S Mid - Late August	11,470	6,480	2,460	210	0	1,890	330	80	0		0.89%	224	0	0	0	168	56	55					0	
September	9,240	2,060	2,020	2,700	1,140	1,150	100	50	20		0.73%	24	0	0	0	18	6	35,900					0	
Mid September Coho	0	0	0	0	0	0	0	0	0		0.00%	0	0	0	0	0	0	0					0	
October Coho	5,990	0	740	240	660	4,140	30	170	10		0.27%	135	0	79	11	101	33	63,600					11	
Late Fall sturgeon	0	0	0	0	0	0	0	0	0		0.00%	0	0	0	0	0	0	0					0	
Tributary Sport	8,090	0	300	5,110	2,680	0	0	0	0		-							32,500					0	
Lower River Subtotal	89,870	17,280	19,350	25,310	5,040	15,910	2,770	660	3,550		6.88%	4,312	0	2,625	169	1,435	157	208,761					12	
Sport (Bonn-Hwy 395 Br.)	1,350	0	1,260	0	0	50	40	0	0		0.46%	33,900	2,290	21,600	800	8,940	300	800		1,260			0	
Treaty Indian (Total)	128,100	46,710	57,250	-	-	16,050	8,090	-	-		20.68%	13,761	0	6,173	1,814	3,866	1,908	1,649		1,649			0	
Dam Counts																								
(Bonneville Trap)		0																						
Bonneville Dam Passage	467,340	141,720	257,710	-	-	22,740	45,170	-	-			477,980	24,980	235,800	87,300	97,600	32,300	87,800		87,800			0	
McNary Dam	141,680	-	141,680	-	-	-	-	-	-															
Lower Granite Dam		-	-	-	-	-	-	-	-															
Escapement																								
Hatchery	-	67,440	-	50,140	-	19,202	1,631	-	-															
(WA only)	-	-	-	29,780	-	-	-	-	-															
Natural (WA)	-	-	-	-	18,380	-	-	-	-															
Natural (OR)	-	-	-	-	1,280	-	-	-	-															
Surplus (WA only)		60,440	98,180	35,460	12,680	13,450																		
				18,105																				